# Supporting Safer Housing Reconstruction After Disasters

## Planning and Implementing Technical Assistance at Large Scale

UN HABITAT
FOR A BETTER URBAN FUTURE

AXA

# Supporting Safer Housing Reconstruction After Disasters

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FOR A BETTER URBAN FUTURE

Dedicated to all government officials, local construction sector professionals,
and community members providing technical assistance for housing recovery,
often while dealing with the challenges of rebuilding their own homes.

# Document Information

Supporting Safer Housing Reconstruction After Disasters

Planning and Implementing Technical Assistance at Large Scale

UN-Habitat/AXA

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UN-Habitat

Shelter is a fundamental human need in both times of stability and in times of crisis. Even so, past experience has shown that in post-disaster situations, not enough attention is given to supporting the construction of safer housing, to ensure that affected communities can withstand future crises and recover more rapidly. As natural disasters become increasingly common, it becomes ever more crucial to identify the key components of safer housing (re)construction, in order to build back better and more resilient homes.

This publication builds upon extensive experience in post-disaster housing recovery efforts from all over the world. UN-Habitat has been supporting local government, construction sector professionals, and communities in housing recovery for over twenty years. This document draws on this experience.

A key principle that emerges from these lessons is that survivors of crises must be given every opportunity to actively shape their own recovery. Without strategic planning and technical assistance, there is a risk that emergency construction solutions become permanent. Emergency shelter response must already incorporate longer-term elements that will increase resilience to future disasters. Finally, it is paramount that all response efforts put people first: supporting them with technical assistance in the choices they make about their homes, empowering them to build safer and better, and leaving a positive institutional legacy. All of this contributes to mitigating future disasters and maximising both humanitarian and developmental resources.

By providing practical and adaptable guidance on technical assistance through these guidelines, UN-Habitat seeks to empower actors on the frontlines of housing reconstruction, and encourage decision makers and practitioners to give greater consideration to technical assistance in reconstruction efforts.

Safer housing construction may also require retrofitting in order to reduce vulnerability in urban centres, and prevent or reduce the negative impacts of disasters. It is with such an understanding that these guidelines are equally aimed at bringing good practices and recommendations to the built environment sector operating in non-crisis circumstances.

These guidelines are the result of a broad collaboration between many different organisations and institutions, from the private sector–most notably, AXA, who generously supported the project– as well as various local government officials, international non-governmental organisations, and humanitarian and development actors. The result are concrete, accessible and practical guidelines that can be used in a broad range of contexts.

**Maimunah Mohd Sharif**

*Executive Director and Under-Secretary-General*

*UN-Habitat*

# Foreword

AXA

We are proud to support this report, which is the fruit of a close collaboration between UN Habitat and AXA, to help bring practical and accessible information on technical assistance to all stakeholders involved in housing reconstruction. One may ask why AXA is investing in this field. Risk prevention, through measures such as building back better, is at the heart of our vocation as an insurer.

Today, 54 percent of the world's population is living in cities, and by 2050 this number will reach 70 percent. This ever-growing concentration of population and economic value is occurring in areas exposed to more extreme events related to climate change. These trends demand a vigorous mobilization to strengthen urban resilience, to ensure a safe, sustainable and successful future for cities' inhabitants.

As an insurer, AXA can contribute to protecting cities against natural events through the insurance of property loss and casualties for individuals, companies and municipalities. This sits at the heart of the risk pooling nature of insurance. AXA is also an active member of the Insurance Development Forum, a public-private partnership led by the insurance industry and supported by the World Bank and the United Nations Development Program, to optimize and extend the use of insurance-led risk management capabilities to build greater resilience and protection for vulnerable populations affected by climate change.

As an investor, AXA is committed to investing in the infrastructure needed to strengthen cities exposed to more extreme events, to facilitate mobility for residents and to build renewable energy capacity. AXA and the International Finance Corporation (IFC) have launched a $500 million partnership to support resilient infrastructure projects in emerging countries. Such efforts contribute to urban resilience where it is needed most.

AXA is committed to building a stronger and safer society, driven by a science-based risk culture. We are convinced of the importance of better understanding risks, fostering awareness and sharing knowledge. This is why we have also published a Resilient Cities Guide profiling fundamental research projects supported by the AXA Research Fund related to natural hazards and climate change.

We hope that these guidelines will further our collective knowledge and technical capacity to respond to disasters, and help populations better overcome the impacts of natural disasters.

**Denis Duverne**

*Chairman of the Board of Directors*

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# Acronyms

| | |
|---|---|
| **AAAA** | Addis Ababa Action Agenda |
| **ADRRN** | Asian Disaster Risk Reduction Network |
| **AFL** | Action at the Frontline |
| **AFPS** | French Association of Earthquake Engineers |
| **AKDN** | Aga Khan Development Network |
| **ALNAP** | Active Learning Network for Accountability and Performance |
| **ANSSP** | Aceh Nias Settlements Support Programme |
| **ART** | Alternative risk transfer |
| **ASEAN** | Association of Southeast Asian Nations, LAS , CDEMA |
| **AXA** | Not an acronym |
| **BBB** | Building Back Better |
| **BRR** | Building Regulation for Resilience |
| **CAD** | Computer-aided design |
| **CaLP** | Cash Learning Partnership |
| **CARE** | Cooperative for Assistance and Relief Everywhere |
| **CBO** | Community-Based Organisation |
| **CBO** | Community-based organisation |
| **CDAC** | Communicating with disaster-affected communities |
| **CDEMA** | Caribbean Disaster Emergency Management Agency |
| **CERA** | Canterbury Earthquake Recovery Authority (New Zealand) |
| **CGAP** | Consultative Group to Assist the Poor |
| **CGI** | Corrugated galvanised iron |
| **CMP** | Community Mobilization Programme |
| **CRC** | Community Resource Centre |
| **CRED** | Centre for Research on the Epidemiology of Disasters |
| **CRPT** | City Resilience Profiling Tool |
| **CRS** | Catholic Relief Services |
| **DALA** | Damage, Loss, and Needs Assessment |
| **DRF** | Disaster Recovery Framework |
| **DRI** | Disaster Reduction and Human Renovation Institution |
| **DRM** | Disaster Risk Management |
| **DRR** | Disaster Risk Reduction |
| **DTM** | Displacement Tracking Matrix |
| **DUDBC** | Department of Urban Development and Building Construction (Nepal) |
| **ECHO** | European Commission Humanitarian Aid |
| **ECOP** | Employers' Confederation of the Philippines |
| **EERI** | Earthquake Engineering Research Institute |
| **ER** | Early Recovery |
| **ERC** | UN Emergency Relief Coordinator |
| **ERRA** | Earthquake Reconstruction and Rehabilitation Authority |

| | |
|---|---|
| **ESF** | Environmental and Social Framework |
| **EU** | European Union |
| **FEMA** | Federal Emergency Management Agency |
| **GDP** | Gross Domestic Product |
| **GFDRR** | Global Facility for Disaster Reduction and Recovery |
| **GNDR** | Global Network of Civil Society Organisations for Disaster Reduction |
| **GIIF** | Global Index Insurance Facility |
| **GIS** | Geographic Information System |
| **GNDR** | Global Network of Civil Society Organisations for Disaster Reduction |
| **GOAL** | No acronym |
| **GPSS** | Global Program for Safer Schools |
| **GSC** | Global Shelter Cluster |
| **HCT** | Humanitarian Country Team |
| **HFA** | Hyogo Framework for Action |
| **HRRP** | Housing recovery and reconstruction platform |
| **IASC** | Inter-Agency Standing Committee |
| **IBI** | Index Based Insurance |
| **IDF** | Insurance Development Forum |
| **IDNDR** | International Decade Natural Disaster Reduction |
| **IDP** | Internally Displaced Person |
| **IFRC** | International Federation of the Red Cross and Red Crescent Societies |
| **ILO** | International Labor Organisation |
| **IMS** | Information Management Systems |
| **IOM** | International Organisation for Migration |
| **IRP** | International recovery platform |
| **ISO** | International organisation for standardisation |
| **ITDG** | Intermediate Technology Development Group |
| **JICA** | Japan International Cooperation Agency |
| **KAP** | Knowledge Attitudes Practices |
| **LAS** | League of Arab States |
| **LRRD** | Linking Relief Rehabilitation Development |
| **M&E** | Monitoring and Evaluation |
| **MEAL** | Monitoring and Evaluation accountability and Learning |
| **MINUSTAH** | UN Stabilization Mission in Haiti |
| **MIRA** | Multi-Cluster Initial Rapid Assessment |
| **MIS** | Management Information System |
| **MoUD** | Ministry of Urban Development (Nepal) |
| **MTPTC** | Ministry of Public Works, Transport, and Communications |
| **NFI** | Non-food items. |
| **NGO** | Non-governmental Organisation |
| **NRRC** | Nepal Risk Reduction Consortium |
| **NSET** | National Society for Earthquake Technology-Nepal |

| | |
|---|---|
| **OCHA** | UN Office for the Coordination of Humanitarian Affairs |
| **OECD** | Organisation for Economic Co-operation and Development |
| **OFDA** | Office of US Foreign Disaster Assistance |
| **PASSA** | Participatory Approach for Safe Shelter Awareness |
| **PDNA** | Post-Disaster Needs Assessment |
| **PPP** | Polypropylene |
| **QSAND** | Quantifying Sustainability in the Aftermath of Natural Disasters |
| **RCC** | Reinforced Cement Concrete |
| **SAG** | Strategic Advisory Group |
| **SDC** | Swiss Cooperation for Development |
| **SME** | Small Medium Enterprises |
| **TA** | Technical Assistance |
| **TWIG** | Technical Working and Information Group |
| **UCL** | University College London |
| **UN** | United Nations |
| **UNDP** | United Nations Development Programme |
| **UNESCO** | United Nations Educational, Scientific and Cultural Organisation |
| **UN-Habitat** | United Nations Human Settlements Programme |
| **UNISDR** | United Nations Office for Disaster Risk Reduction |
| **UNOPS** | United Nations Office for Project Services |
| **UN Women** | The United Nations Entity for Gender Equality and the Empowerment of Women |
| **UR** | Understanding Risk |
| **USAID** | US Agency for International Development |
| **USD** | US Dollars |
| **VAT** | Value Added Tax |
| **WASH** | Water, Sanitation, and Hygiene |
| **WISS** | Worldwide Initiative for Safe Schools |

# Executive Summary

## What is technical assistance and why do we need it?

Housing is the largest component in building damages caused by disasters. Among the reasons for heavy housing damages are deficiencies in building design and construction, caused in part by low awareness of standards, and poor-quality materials and workmanship. Post-disaster housing recovery involves massive, simultaneous construction. Such an undertaking is accompanied by the risk of replicating or exacerbating existing shortcomings, but also presents opportunities to introduce large-scale improvements through (re)construction. Improvements may address hazard resistance, durability, water and sanitation measures, or environmental performance. Technical assistance can play a crucial role in seizing such opportunities.

The housing sector involves a great number of actors, including house owners and occupants, government at all levels, suppliers of finance, materials and labour, and assistance agencies. The challenge in reconstruction is to enable these multiple stakeholders to achieve improvements together, at a large scale. Technical assistance, through working on standards for reconstruction, and collecting and sharing information for monitoring, can support coordinated reconstruction efforts.

Inadequate technical assistance in post-disaster contexts leaves households without the necessary support, risking the replication of existing shortcomings and missing an opportunity to sustainably institutionalise elements of systems that result in safer construction. Post-disaster needs assessments and post-disaster recovery plans commonly refer to 'building back better' or 'building back safer' housing, emphasising the importance of technical assistance to people reconstructing their homes. In a number of recovery cases, successful technical assistance programmes by governments and assistance agencies have played a vital role in achieving improved housing. In other cases, ambitions to 'build back better' have failed due to (among other things) inadequate technical assistance.

There are several examples of good practice in technical assistance for post-disaster housing reconstruction, but they usually reach small areas or numbers of people. When hundreds of thousands of houses are to be reconstructed simultaneously, planning and implementing large-scale technical assistance that reaches very large populations and the entire area affected remains a paramount challenge. The challenge of scale is mirrored by the challenge of sustainability; ensuring building improvements are institutionalised and normalised on a broad scale in local construction practices for the longer term.

In general, post-disaster assistance strategies are changing from a logistical approach (of construction or provision of materials) to a support approach involving financial and/or technical assistance. The increased prevalence of cash support and housing disaster insurance payments means that procurement of labour and materials is mainly from local markets and reconstruction decisions are made by households themselves. The implications for governments, and humanitarian and reconstruction agencies include new roles and skills required for communication rather than supervision, new models of funding and programming for training rather than for direct construction, new initiatives with private sector material producers to increase supply and improve quality, and new coordination to ensure consistency and coverage of information.

Well-planned and executed technical assistance is an efficient way to contribute to more households reconstructing their homes in a safer way after disasters. This document hopes to contribute to technical assistance assuming a larger role in future housing recovery processes.

## Guidelines: scope and intended audience

These guidelines, aimed at decision makers and implementers across four main stakeholder groups (government, assistance agencies, the built environment sector, and disaster-affected communities), aims to increase the level of knowledge about technical assistance and operationalise its implementation, so that the reconstruction of housing in disaster-affected communities results in sustainably safer housing. The project, executed by UN-Habitat and supported by AXA, has resulted in a document in two parts, Part A and Part B.

### Part A–Why Technical Assistance?

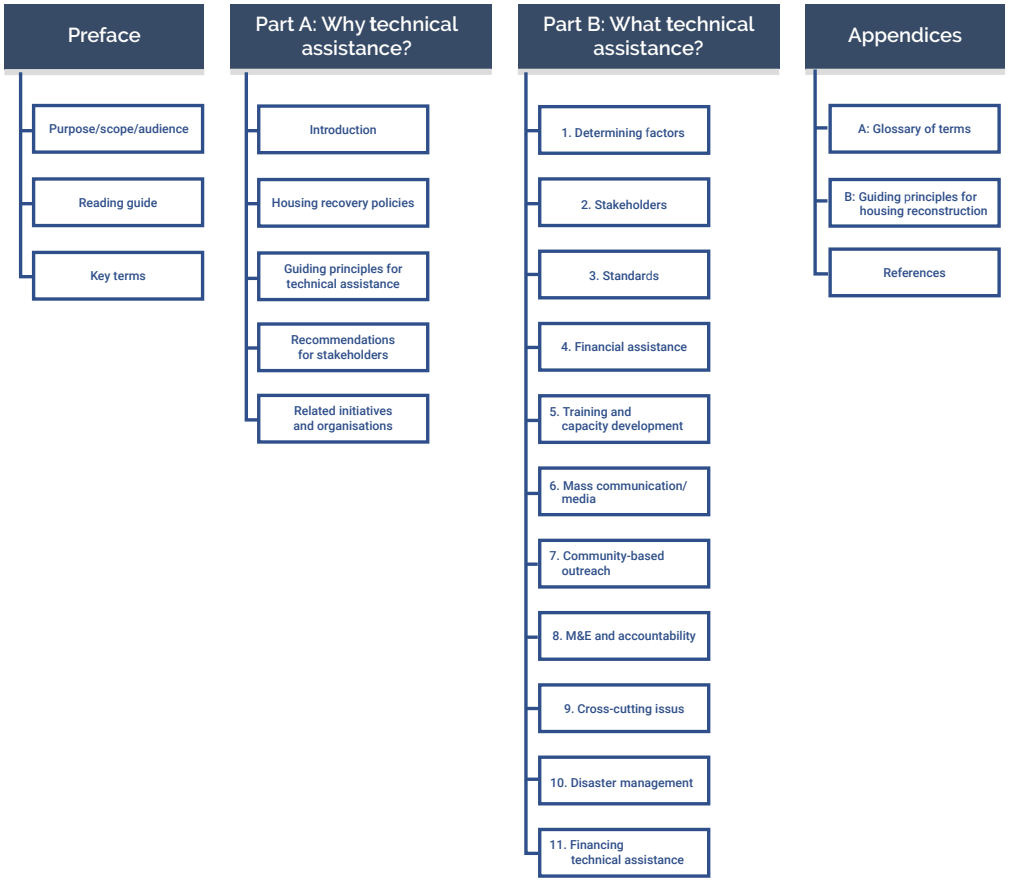
Part A describes the current context of post-disaster housing recovery and what the role of technical assistance could be in ensuring safer housing reconstruction in disaster-affected communities. It then briefly outlines principles for housing recovery, before determining 10 guiding principles for technical assistance. The principles are summarised as follows:

1. *Everyone has a right to advice*
2. *Harness all capacity available to provide technical assistance*
3. *Be strategic to optimise scarce resources for maximum impact*
4. *Timing matters. Start early and sustain assistance.*
5. *Action plan and be flexible. Housing and technical assistance are iterative processes.*
6. *Adopt joined up approaches for multi-dimensional topics*
7. *Technical assistance is an investment in people*
8. *Local is more sustainable. Promote subsidiarity.*
9. *Take a long view. Learn from the past and prepare for the future.*
10. *Aspirations are insufficient. Technical assistance strategies should be realistic and deliver.*

Part A then outlines key recommendations for stakeholders, and ends with an overview of initiatives and organisations relevant to technical assistance in housing recovery.

### Part B–What Technical Assistance: Thematic Chapters

Part B is a compendium of guidance for planning and implementing technical assistance activities in an effort to operationalise the principles set out in the introduction guide. Consisting of 11 thematic chapters, Part B addresses organisational arrangements, roles and relationships, funding, cross-cutting issues, disaster risk management cycles, and institutionalisation. These 11 chapters are not meant to serve as a step-by-step manual, but rather present options for technical assistance activities. Each chapter consists of an introduction, a generalised strategy, risks and challenges, factors to consider, and guidance on individual activities. Brief descriptions of each thematic chapter are presented below along with a diagram illustrating the structure of the document.




#### Chapter 1: Determining factors for housing recovery and technical assistance for housing recovery

Explores factors affecting housing recovery more broadly and those which affect technical assistance for housing recovery more specifically. The extent to which characteristics, context, and response capacity influence recovery are explored as factors framing decisions at all levels and all stages, from government shelter response and housing recovery policies, to household decisions on how to rebuild.

#### Chapter 2: Institutional arrangements and stakeholders

Explores government institutional roles in recovery and the range of government, built environment, and assistance agency stakeholders involved in technical assistance for housing recovery. This chapter analyses options for the leadership, coordination, and management of post-disaster housing reconstruction at national and local levels, and in the context of the larger disaster management institutional framework. Institutional arrangements include mechanisms to define and ensure adherence to housing recovery policies, strategies, and regulations; to mobilise and coordinate stakeholders and resources; and to assure quality and accountability.

#### Chapter 3: National-level technical assistance: developing technical standards and guidance

Explores technical assistance activities at central the level, providing decisions and content for dissemination. While many documents mention technical assistance in terms of mason training and community-level mobilisation, this chapter highlights, through a discussion of the

development of technical standards and guidance for housing recovery, the significance of national, central or policy-level technical assistance.

### Chapter 4: Financial assistance in relation to technical assistance

Financial assistance for households and communities refers to material or financial resources provided to disaster-affected households and communities to support their housing recovery. This chapter explores the objectives of financial and material support, the range of mechanisms for provision and the implications for technical assistance.

### Chapter 5: Training and capacity development

Explores training for a range of target groups with key roles to play in housing recovery. Developing skills for housing recovery actors requires planning for both quantity and quality: the number of people to execute various tasks and their levels of competency to execute tasks to required standards. This chapter discusses training or capacity development needs for a range of groups including non-skilled workers, construction workers, construction material stakeholders, construction professionals, recovery programme personnel, local partners, government officials, and media.

### Chapter 6: Mass communication and media

Explores information and engagement through media. Mass communication media constitutes print, audio-visual, phone, and internet-based media production and dissemination of information. Mass communication may be one-way, from supplier to audience, or may involve two-way communication exchange such as platforms for debate, collection of, and response to, questions.

### Chapter 7: Community-based outreach, mobilisation and engagement

Explores a wide range of decentralised technical assistance in disaster-affected communities, including fixed location and mobile activities, and community and household assistance activities. Community-based technical assistance facilitates the communication and adaptation of policies and standards on behalf of authorities, and just as importantly, is used to collect and convey community questions, concerns, priorities, requests, suggestions and modus operandi to authorities to inform policy development, standards, information campaigns and other activities.

### Chapter 8: Baselines, monitoring and evaluation, accountability, and quality assurance

Explores tools and systems to support planning and implementation of technical assistance through tracking and analysing components of housing recovery. The information discussed includes both the preliminary data required to effectively plan technical assistance activities (e.g. damage assessments) and establish baselines from which activities can be evaluated, as well as information which is collected throughout the implementation of activities. Collective sharing, storing, and dissemination of information is also discussed, as much information is either not available to all stakeholders, or is lost shortly after is has been generated.

### Chapter 9: Cross-cutting issues

Discusses important cross-cutting issues for technical assistance activities, including how to address gender and marginalized groups.

### Chapter 10: The disaster management cycle

Planning Before Disasters, Institutionalisation and Sustainability Beyond Recovery: explores how technical assistance activities and their outputs can be incorporated into long-term preparedness and response plans, such as disaster recovery frameworks and development plans.

### Chapter 11: Financing technical assistance for housing recovery

Discusses what technical assistance programmes and activities cost, how they are an effective use of resources, and how funding can be ensured.

*Imran Bhatt in front of his destroyed home 2005.* **Source:** *Robbie Ryan/GOAL.*

# PREFACE

Around the world hundreds of thousands of households face the task of reconstructing their homes after disasters every year. They need access to timely and appropriate technical assistance so they can make informed decisions, avoid reinstating vulnerabilities, and instead incorporate risk reduction and other improvement measures for the longer-term futures of their families.

In order for technical assistance activities to be effectively planned and implemented at the scale required for housing recovery, the humanitarian and development community needs to act with greater predictability, coherence and efficiency assisting governments and communities after disasters.

The preparation of this guidance document by UN-Habitat, supported by AXA, draws upon decades of post-crisis experience to promote a more coordinated and comprehensive approach to technical assistance, with guiding principles for decision makers and operational guidance for implementing actors.

# Purpose, scope, and intended audience

## Purpose of these guidelines

These guidelines aim to promote a more coordinated and comprehensive approach to technical assistance, providing guiding principles for decision makers and guidance for implementing agencies.

These guidelines describe the range of activities which comprise technical assistance, the range of stakeholders involved and how they might be more effectively and efficiently deployed to meet the needs of communities undertaking housing reconstruction.

### These guidelines address two levels:

- **Part A: Why technical assistance?**

An introduction to housing recovery and the need for, and role of, technical assistance.

- **Part B: What technical assistance?**

A compendium of guidance on activities for those who are planning and implementing technical assistance, reinforcing and operationalising the principles set out in the introduction.

These guidelines do not aim to prescribe a specific methodology or set of activities; rather they aim to promote discussion on the value of technical assistance, the roles of various actors and options for implementation. Assuming each disaster presents different conditions and post-disaster situations are highly dynamic, greater clarity on overall and shared objectives and a wider menu of approaches and tools should enable stakeholders to make more informed plans and adjust to their different technical, institutional and economic contexts.

## The scope of these guidelines

These guidelines focus on the actors and activities involved in developing and promoting technical assistance for housing reconstruction and repair after disasters. They provide an expanded description of technical assistance to supplement guidance on post-disaster needs assessments (World Bank/UNDP/European Union 2014) and disaster recovery framework planning (World Bank/UNDP/European Union 2016). They build upon ‘Safer Homes, Stronger Communities’ (GFDRR 2010) guidance for post-disaster housing reconstruction, learning from technical assistance experience in recent major disaster recovery cases (Indian Ocean Tsunami 2004, Pakistan earthquake 2005, Yogyakarta earthquake 2006, Haiti earthquake 2010, Pakistan floods 2007, 2010, 2011, Philippines typhoon 2014, Nepal earthquake 2015). They take into account

emerging issues in post-disaster shelter and housing, including urban contexts and cash programming. These guidelines do not aim to provide comprehensive guidance, but rather introduce and link a wide range of issues and refer readers to existing resources for further detail.

- These guidelines build on pre-disaster preparedness and long-term and developmental initiatives in risk reduction, building code implementation and housing sector improvements, but are focused on the specific challenges and opportunities arising in post-disaster situations.
- They explore institutional, financial and human resource aspects of supporting housing reconstruction and repair, but do not analyse engineering aspects of construction standards or guidance.
- They are limited to disaster contexts and do not explore the specific issues arising in conflict-related damage and reconstruction (Fan 2016, IRC, UNHCR).
- They do not address land, property, tenure and settlement recovery, all of which are critical topics for housing recovery. These topics are addressed more comprehensively in other publications and initiatives (Global Land Tool Network UN-Habitat 2010, Global Alliance for Urban Crises, IRC).

### Intended audience

These guidelines are intended for decision makers and implementing agencies involved in, or likely to be involved in, supporting housing recovery after disasters including:

- Decision makers: National and local governments, financing agencies, professional bodies and coordination bodies.
- Implementing groups: Humanitarian and development organisations, (local) professionals (engineers, architects), housing financial service providers, development and built environment education providers, media providers.

Decision makers and implementing agencies may be concerned with a wide range of topics including: disaster risk management, housing, settlements and construction, environmental management, economic development, social inclusion, communications and information management.

While the focus of the guidelines is on housing recovery after a disaster, the guidelines may also enhance risk preparedness and the promotion of sustainable improvements in housing construction in locations not prone to hazards.

## Reading guide

**Part A: Why technical assistance?** provides an introduction to housing recovery and technical assistance, guiding principles and recommendations for key stakeholder groups.

**Part B: What technical assistance?** provides a series of thematic chapters.

**Technical assistance strategies:** are composed of combinations of activities. The aim of these guidelines are to provide general guiding principles and a wider menu of activities to better equip decision makers and implementing agencies to devise appropriate strategies according to their recovery situation, mandates and means. Thematic chapters discuss and describe activities in the following domains of technical assistance:

- **Determining factors:** explores factors affecting housing recovery and factors affecting technical assistance for housing recovery.
- **Institutional arrangements and stakeholders:** explores government institutional

roles in recovery and the range of government, built environment and assistance agency stakeholders in technical assistance for housing recovery.

- **Developing policies, standards and programmes:** explores technical assistance activities at central level, providing decisions and content for dissemination.
- **Financial assistance in relation to technical assistance:** explores the objectives of financial and material support, the range of mechanisms for provision and the implications for technical assistance.
- **Training and human resource development:** explores training for a range of target groups with key roles to play in housing recovery.
- **Mass communication and media:** explores information and engagement through print, radio, internet, phone and social media.
- **Community-based outreach, mobilisation and engagement**: explores a wide range of decentralised technical assistance in disaster-affected areas, including fixed location and mobile, community and household assistance activities.
- **Programme baselines, monitoring and evaluation, and quality assurance:** explores tools and systems to support planning and implementation of technical assistance through tracking and analysing components of housing recovery.
- **Cross-cutting issues:** discusses important cross-cutting issues for technical assistance activities.
- **Recovery in the disaster risk management cycle:** explores how technical assistance activities and their outputs can be incorporated into long-term preparedness and response plans.
- **Financing technical assistance:** discusses what technical assistance programmes and activities cost, how they are an effective use of resources, and how funding can be ensured.

### Coordination, dissemination and advocacy:

These guidelines is developed in coordination with related initiatives. These include:

- Programmes developing hazard-resistant construction or building for safety information
- Long-term programmes strengthening government regulatory systems for building standards, control and compliance
- Humanitarian programmes promoting communication and providing training in shelter sector response

# Key terms

The following definitions of key terms are used in this document.

### What is a disaster?

UNISDR defines a disaster as: 'A serious disruption of the functioning of a community or a society at any scale due to hazardous events interacting with conditions of exposure, vulnerability and capacity, leading to one or more of the following: human, material, economic and environmental losses and impacts. The effect of the disaster can be immediate and localized, but is often widespread and could last for a long period of time. The effect may test or exceed the capacity of a community or society to cope using its own resources, and therefore may require assistance from external sources, which could include neighbouring jurisdictions, or those at the national or international levels' (UNISDR 2009).

The UNISDR definition highlights the multiple dimensions of disasters and the significance of capacity and external assistance, both factors which inform these guidelines.

### What is housing recovery and resilience?

Recovery: 'The restoring or improving of livelihoods and health, as well as economic, physical, social, cultural and environmental assets, systems and activities, of a disaster-affected community or society, aligning with the principles of sustainable development and "build back better", to avoid or reduce future disaster risk' (UNISDR).

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

Defining recovery raises challenges to determine how it should be measured, or what constitutes successful recovery. Restoration of pre-disaster conditions, often termed 'return to normal' (Sherrieb et al. 2010:228), or which focus on replacement of assets (Tafti & Tomlinson 2015), is contested as inadequate by many who argue that recovery must not be a reinstatement of vulnerability to disasters and must aim for improvements or 'building back better' (Blaikie et al. 2004). All options require clarification of the components critical to return to normal, the vulnerabilities to be reduced and the extent to which they are to be reduced.

While definitions and models of 'housing recovery' encompass all phases and activities, including pre-disaster preparedness, we distinguish between 'shelter' and 'housing recovery' (Haas et al. 1977, Burton et al. 1978). In these guidelines, 'shelter' refers to temporary accommodation arrangements (including tents, temporary structures, rented or hosted accommodation), 'housing recovery' refers to reconstruction, repair or upgrading of permanent durable accommodation or dwellings affected by a disaster, as well as the restoring or improving of the means of housing production, including regulatory systems, access to building materials, labour and finance.

## What is technical assistance for housing recovery?

Technical assistance (TA) includes a broad range of inputs to inform, guide and add value to housing recovery undertaken by households, communities and governments, either with their own resources or with financial or material assistance.

Technical assistance describes measures that aim to improve recovery outcomes through the establishment, rehabilitation or development of systems, capacities, policies and programmes. Technical assistance operationalises a support approach; enabling informed choice and flexibility for affected populations, acknowledging their diverse needs and their primary role and responsibility in the housing recovery process and strengthening systems towards greater resilience and sustainability.

Technical assistance is not limited to engineering expertise, but encompasses social, communication, information management, business development, legal, administrative and other expertise and assistance activities.

Many elements of technical assistance are non-structural. The term 'non –structural measures' is defined by UNISDR as 'measures not involving physical construction which use knowledge, practice or agreement to reduce disaster risks and impacts, in particular through policies and laws, public awareness raising, training and education', and to distinguish from 'structural' or physical measures.

Socio-technical assistance is a related term. The term 'socio-technical assistance' is used by some organisations to emphasise the importance of people as well as technology in assistance activities. Some categories of activities are described in other publications as 'institutional support', 'community facilitation', 'capacity building', 'advisory services' or 'quality assurance', usually reflecting the mandates of the assisting agencies.

For the purpose of simplification, in this document, we use the term 'technical assistance' as an umbrella term for all non-financial/material assistance incorporating all expertise and all activities.

Technical assistance for housing recovery ideally comprises a network of inter-related measures including: regulatory systems and institutional arrangements, the development of policies and programmes, standards and guidance, construction material and finance development, human resource development of knowledge and skills, public awareness, community mobilisation and engagement, quality assurance, monitoring and evaluation of recovery progress, and institutionalisation of recovery learning.

*Typhoon Haiyan, known as Super Typhoon Yolanda in the Philippines, was one of the most intense tropical cyclones on record. 8 November 2013. Tacloban, Philippines.* **Source:** *ymphotos/Shutterstock.com*

# PART A
# WHY TECHNICAL ASSISTANCE?

# Introducing housing recovery and technical assistance

This section describes 'where we are now', or current key approaches, challenges, and opportunities in disaster recovery both in general and housing recovery. The following analysis outlines why technical assistance is critical to addressing those challenges, seizing opportunities and developing approaches that can contribute to better housing recovery outcomes.

## Where are we now: housing recovery. Current thinking, challenges and opportunities.

### Owner-Driven Housing Reconstruction

There has been significant progress in housing recovery thinking and practice since 'Shelter After Disaster' (UNDRO 1982) advocated for a central role for disaster survivors in their own housing recovery. 'Safer Homes, Stronger Communities' (GFDRR 2010) confirmed the role of the affected populations as main actors in housing recovery and the role and resources of government and assistance agencies as complementary or support. Planned resettlement is now rare and more likely to include safeguards. Post-disaster housing programmes are less commonly characterised by large-scale contracted (re)construction and inappropriate technological choices. Indigenous building knowledge derived from local materials and practices has seen a revival through analysis and endorsement by governments and technical professionals in post-disaster situations, considering not only hazard-resistant criteria but also affordability and accessibility.

'People-centred' approaches have been formalised as 'owner-driven' or 'user-driven' reconstruction approaches, differentiated from 'agency-driven' reconstruction. 'Agency driven' reconstruction describes housing constructed or provided by government or humanitarian agencies, often on new sites. The term 'owner driven' reconstruction was coined to describe house owners managing rehabilitation or reconstruction themselves on their own sites. Households may receive technical assistance and/or financial assistance, usually subject to compliance with conditions such as completion of the building or adherence to standards. The term 'user-driven reconstruction' describes not only 'owner-driven reconstruction' but also reconstruction by renters or occupants who may not own the land or house.

Successful outcomes after the 2001 Gujarat, 2005 Kashmir and 2006 Yogyakarta earthquakes and after the 2004 Indian Ocean Tsunami contributed to the widespread promotion of 'owner driven' reconstruction policies directly through financing and programming and indirectly through guidelines. 'Owner-driven' reconstruction strategies have been more effective than 'agency-driven' reconstruction to support the construction of very large numbers of households cost-effectively and transparently, it has also facilitated diverse housing choices and rapid reconstruction and promoted institutionalization of risk reduction measures (Schilderman & Lyons 2010).

However, 'owner-driven' housing reconstruction programmes may also be characterized as primarily market-driven, and criticized as likely to reinstate or exacerbate pre-disaster inequities or vulnerabilities (Peacock et al 2018). Issues also arise in relation to confirmation of land and house status, as well as definitions of households. Experience from disaster recovery over the last two decades shows that some households and groups struggle or fail to rebuild and that 'owner driven' strategies need to adapt in order to identify and support those in most need and to address complex issues such as heritage building and urban rental reconstruction with more tailored technical solutions and financial mechanisms. Humanitarian agencies commonly respond by targeting

*Haiti after the 2010 earthquake.* **Source:** *Giovanni Cassani/IOM.*

*The majority of households in Haiti have very low incomes and reconstructed their homes without financial or technical assistance, reinstating or increasing their disaster risk.* **Source:** *UN-Habitat.*

*House reconstructed by agency at high cost on right. House repaired by owner with own resources on left.* **Source:** *UCL.*

(additional) assistance to individual households, but recovery policies and systems require structural improvements to make them work better for the vulnerable.

'Owner driven' programmes ideally build upon analysis of the pre-disaster local housing sector and strengthening housing production capacity. Understanding pre-crisis socio-economic structures can help identify who is already ill-served and likely to have difficulties in recovery. Understanding post-disaster market dynamics can help identify risks such as inflation, as well as new opportunities. Strengthening housing systems to function better in normal times can mitigate the impacts of disasters and improve the prospects for housing recovery, in other words; make housing systems more resilient.

*Government engineer on site at weekend event demonstrating standards for steel reinforcement.*
**Source:** *Ben Noble/Internews.*

## Building back better

Risk reduction initiatives, post-disaster needs assessments, disaster recovery plans, programmes and projects increasingly refer to 'building back better' or 'building back safer' housing after disasters, reflecting a growing consensus that recovery should not simply replace assets or reinstate the deficiencies that contributed to disaster losses but must aim to reduce vulnerabilities and strengthen resilience. In 2015, Build Back Better (BBB) became one of four priorities highlighted in the Sendai Framework for Disaster Risk Reduction 2015-2030. However, there is rarely consensus on what 'better' means, how it will be defined or achieved (Fan 2013). In housing recovery, building back better usually refers (at least) to improved construction and reduced risk, although the prioritisation by technical experts of 'better' safety often diverges from household prioritisation such as 'better' sanitation or livelihood security. In broadest terms 'building back better' may encompass institutional and social changes.

*Reviving traditional knowledge of earthquake resistant techniques in local materials.* **Source:** *UN-Habitat.*

While disasters may be windows of opportunity for change, particularly to reshape the built environment, most evaluations of recovery find that the opportunities for improvement are largely missed. Reasons include competing recovery agendas, fragmented programmes and insufficient understanding of local institutions, markets and communities. If technical assistance activities are to contribute to building back better, they need to be conceived, planned and implemented with greater reflection on the definition of 'better', analysis of local systems and coordination of interventions.

In a number of recovery cases successful technical assistance programmes, governments and development partners have played a vital role in achieving improved housing. 'Owner driven' housing reconstruction after earthquakes in India (2001), Pakistan (2005), Indonesia (2006), Chile (2010) and after typhoons in Bangladesh (2007) and Tonga (2014) demonstrate how over 1.5 million households have managed reconstruction and rehabilitation of their own homes in compliance with government standards across a range of contexts. The key to success in these cases was collective understanding and timely operationalisation of technical assistance. However, in other cases, the aim to 'build back better' and to promote 'owner driven' reconstruction have failed due to inadequate technical assistance.

To enable affected populations to 'build back better', it is important that decision-makers in government, assistance agencies, financial providers, technical institutions, media and affected community representatives have a better understanding of the principles of rapid and sustained technical support at large scale in a post-disaster context, the detail of activities involved, the sequence of and links between activities and the resources involved.

## The opportunities of cash transfers, communication and information technologies

*Source: IFRC.*

Over the last decade, humanitarian and reconstruction assistance has changed significantly from a provision model to a support model. The provision model was based on logistics, providing standardised materials and constructing houses directly for affected populations, with the majority of decisions taken by assistance agencies. The support model involves financial and/or technical assistance. Financial assistance is usually in the form of cash or vouchers enabling households to procure according to their own priorities, technical support may involve training or information, for example, and the majority of decisions are taken by households and communities themselves. Over 50 percent of all humanitarian assistance following the Nepal earthquakes in 2015 was in the form of cash.

The expanded use of cash support in disasters is building upon extensive growth in cash transfer social protection programmes and on progress in digital technologies and financial services. Over 2.5 billion people are now covered by safety net programmes including half of the poorest 20 percent of the global population. The number of low and middle-income countries with social safety net programmes has doubled in the last two decades from 72 to 149 countries (World Bank 2017). Insurance coverage has likewise increased through growth in microinsurance, to over 500 million low income people in the 100 poorest countries. Six billion people are estimated to have access to mobile phone devices enabling convenient mobile financial services, including for many traditionally excluded from the formal financial system. (Demirgüç-Kunt et al. 2015). The increased use of cash support has a number of implications. Many households can choose to repair or reconstruct earlier, procuring labour and materials mainly from local markets. The implications for governments, humanitarian and reconstruction agencies supporting recovery include: the requirement for new roles and skills for communication rather than supervision, new models of funding and programming for training rather than for direct construction, new initiatives with private sector material producers to improve quality and new coordination to ensure consistency and coverage of information.

Wider prevalence of disaster insurance and cash support increase vital access to resources including credit, addressing a key barrier to timely recovery. Social safety net programmes facilitate large-scale cash assistance for populations affected by crisis, potentially affecting the volume of funding channelled through humanitarian organisations, who may adapt to strategically supplement and add value to cash systems, by focusing on rights, transparency and accountability, and/or focusing on associated technical assistance to inform the use of the finance. (Pelham et al 2011, CGDEV 2015, World Bank 2017, CaLP 2018).

Digital and mobile technologies have changed financial services and revolutionized the production of and access to data, including assessment of disaster risks, assessment of damage, communication of disaster recovery policies and technical guidance. Information technologies provide opportunities to support coordination of stakeholders, real-time monitoring of progress and responsive decision-making. New media provide opportunities to engage affected populations through channels ranging from video how-to demonstrations to crowdsourced collection of questions. The deployment of new technologies in post-disaster recovery may involve new stakeholder groups, such as internet providers, new profiles, such as programmers and requires new skills and mindsets among authorities and assistance actors to embrace the potential of common information management systems, greater public access and transparency.

## Linking humanitarian, reconstruction and development assistance

The World Humanitarian Summit and resulting Grand Bargain[1] 2016 built on the Paris Declaration 2005 and Accra Agenda for Action 2008 calling for greater coherence and collaboration between humanitarian and development actors and actions and support for local responders (Agenda for Humanity 2017). Greater harmonization is particularly needed in the housing sector, where there is insufficient coordination between emergency shelter and housing reconstruction actors and activities, at global or operational levels. In the majority of crisis cases, coherence between the phases and stakeholders is further frustrated by delays and complexity in establishing government leadership for housing recovery. Sectors such as health and education often have more clearly defined policies and institutional mandates than housing and more experience in partner coordination. Humanitarian and development organisations cannot ensure full housing recovery for all affected by crisis, but they can add value to the resources and actions of others particularly if they act collectively and strategically.

Debris management and rehabilitating infrastructure can reduce displacement and enable communities to stay at or return to origin. Re-establishing building material production and markets, transportation and communications systems can restore or expand construction sector capacity. Training can increase and improve labour supply and equip communities to better manage construction. Settlement-level rehabilitation or upgrading such as watershed management may best mitigate recurring flood risks to housing.

Technical assistance is a vital area for collaboration where a joint programme can enable earlier, wider and sustained support to affected communities. Technical advice can potentially accelerate and improve policies and programming on topics including risk mitigation, land and property rights, and community engagement. Humanitarian and development organisations frequently mobilise technical expertise, but inputs are usually project-related with limited replication or institutionalisation.

Optimising the investment requires changes to how experts are deployed including how they interact with authorities, how advice is used or shared, and recognising and promoting local expertise. The quest for multiplier effects and greater impact from humanitarian and development action in recovery is based on optimising resources and the principles of coverage, equity and the affected population's right to access support, which inform the emergency shelter response. Delivering on the humanitarian principle of protecting the most vulnerable requires strengthening systems with safeguards to help those who may be left out or left behind, not just in recovery but in future crises.

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[1] The Grand Bargain, launched during the World Humanitarian Summit in May 2016, is a unique agreement between the largest donors and humanitarian agencies who have committed to improving the effectiveness and efficiency of humanitarian action. The Grand Bargain is based on the concept of 'quid pro quo': if donors and agencies each accept changes, aid delivery will become more efficient, freeing up human and financial resources for the benefit of affected population

source: www.interagencystandingcommittee.org/grand-bargain-0

## Learning from past recovery experience

*Source:* *Vero Wijaya/UN-Habitat.*

Landmark disasters have a major impact on recovery policies and practices. The Gujarat and Kashmir earthquakes demonstrated the potential of 'owner driven reconstruction' at large scale (Lyons & Schilderman 2010). The Indian Ocean tsunami highlighted the need for coordination and for integration of risk reduction measures in reconstruction leading to the establishment of the IASC cluster system and Hyogo Framework for Action (BRR 2006, Cosgrave 2007). The 2010 earthquake in Haiti raised awareness of factors involved in urban disasters and generated traction for 'settlement' or 'area-based' programming (World Bank 2016). Lessons from frequently recurring disasters including small-scale disasters has been highlighted in annual World Disaster Reports issued by the IFRC. Learning from real crises provides evidence of what policies and assistance works effectively, helping to promote good practices and shared methodologies, but also provides useful evidence of repeated shortcomings and generates pressure or momentum for improvements and change.

Reporting on, evaluating and learning from housing and settlement recovery tends to be fragmented, making it difficult to see a wider picture or the relationships between the parts. There is data on the emergency or on the reconstruction, but rarely both together. There is data on government policies or on humanitarian projects, but 'event' reviews such as the tsunami coalition demonstrate the value of joint reflection and consolidating different viewpoints as well as the potential to use the learning process to advance institutional change. The 'Haiti: What did we learn' (GFDRR 2016) consolidated shelter, housing, land and urban recovery data over the first two years, but longer time frames are needed to explore reconstruction outcomes and issues such as sustainability.

Learning from technical assistance experience in housing recovery tends to be limited to agency or project level without reference to overall recovery outcomes and without analysis of critical aspects such as cost effectiveness. It is difficult to find overviews of how technical assistance was planned or implemented after catastrophic disasters or recurring minor disasters, including the extent of coverage of technical assistance, the number or types of agencies involved, the total or detailed budgets, or documentation on activities including training, model houses or material quality assurance.

Authorities, built environment stakeholders and assistance agencies tasked with planning technical assistance for housing recovery in new disaster situations have access to aspirational policies but very little practical guidance. It is unsurprising that we find poor planning and insufficient funding for technical assistance strategies. Without more comprehensive documentation and analysis of technical assistance implementation, learning is inadequate, the transfer of experience is limited and there is negligible institutional change to better address the need for better planned, funded and implemented technical assistance.

In addition, analysis of the time required for reconstruction and the actual cost of reconstruction can provide valuable lessons to share with those in comparable new crisis situations. Organisations with previous recovery experience might play vital roles in educating authorities, media and other stakeholders on realistic time frames, on challenges and opportunities to anticipate, and highlight the importance of early and continuous planning in order to speed up recovery and to mitigate rising costs for example.

## Preparing for current and future recovery challenges

Anticipating the needs for technical assistance for housing recovery in future disasters involves preparation in terms of mitigation of risks and pre-disaster planning for recovery in the event of a disaster and takes into account emerging issues including urbanization and climate change.

### Urbanization

In 2014, 54 percent of the world's population was living in urban areas, and this proportion is expected to rise to 66 percent by 2050 (UNDESA 2014). Urbanization is a critical lens through which to prevent, prepare for and respond to disasters. The most rapid urbanization is occurring in Asia and Southern Africa and particularly in secondary cities, straining the capacity of authorities in planning and building regulation and the capacity of infrastructure including drainage and flood barriers. Urban areas have often grown in hazard prone locations with increasing populations and assets exposed to hazards.

Urban contexts are characterized by complexity, interlinked systems, higher density, multi-story, multi-use, multi-owner buildings, high levels of renters, neighbourhoods with specific challenges such as historic city centres, informal settlements and areas with low-income or transient populations, as well as contested land or fragile environments, all of which bring additional complexity to housing recovery. Urban contexts also present advantages for technical assistance, such as concentrated and accessible populations, large and diversified markets, high levels of skills and expertise and proximity to decision makers and authorities.

Urbanization involves the building of homes (houses, apartments and other dwellings), more than any other building type. Approximately 60 percent of the land expected to be urbanized has yet to be built (Elmqvist 2013). During this time of rapid urbanization, seizing opportunities to promote improvements in the (re)construction of housing can make a major contribution to building resilient cities.

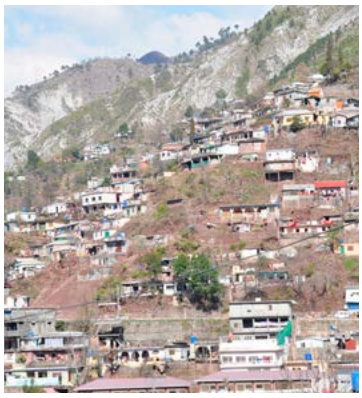
### Climate change

The impacts of climate change are contributing to increasing incidents of disasters. Climate change is expected to cause more severe weather, heat waves and more frequently occurring typhoons/hurricanes and heavy rains causing flooding. Many areas of high risk are also rapidly urbanizing coastal settlements.

Disasters cause building damage or place strains on housing and settlements such as by extreme temperature or drought. The risks of structural damage and of strain on services are both challenges that can be addressed through improved building and infrastructure performance.

The development and promotion of building and settlement improvements through technical assistance after disasters can address more than hazard resistance to introduce improvements through the construction process, from environmentally sustainable material production, higher performance housing design and construction and services such as water management and energy efficiency.

*Increasing density, increasing risk.*
**Source:** *UN-Habitat.*



*Urbanization on land identified as extremely hazardous.* **Source:** *UCL.*

*Addressing disaster damage in cities requires a complex range of technical assistance and expertise.*
**Source:** *Shelter Cluster Nepal.*

*Urbanization increases the importance of compliance with regulations.*
**Source:** *Shelter Cluster Nepal.*

# Why is technical assistance important?

*Haiti informal neighbourhoods. Displaced families in blue tents.*
**Source:** *Giovanni Cassani/IOM.*

*Reconstruction after the earthquake in Haiti, materials on site and most houses under construction at the same time.* **Source:** *APDER.*

*Informal residential neighbourhood. Haiti.*
**Source:** *UN-Habitat.*

## Housing is large-scale and change is complex

Housing represents over 80 percent of the built environment and usually the largest component in building damages caused by disasters. Shelter, housing repair, reconstruction and the replacement of household goods represent an average of 50 percent recovery costs in disasters over the last 30 years (GFDRR). Among the reasons for heavy housing damages are shortcomings and vulnerabilities in design and construction, caused in part by low levels of awareness of standards, by poor quality materials and workmanship and by weak regulatory systems in the housing sector.

Post-disaster housing recovery involves large scale simultaneous construction, with the risk of replicating or exacerbating vulnerabilities, but also presenting opportunities to ameliorate vulnerabilities through improved construction. Improvements may address hazard resistance, durability, water and sanitation or environmental performance.

Compared to other infrastructure and social sectors, the housing sector involves not only the largest number of buildings, but also the largest number of actors, with multiple stakeholders in terms of owners, sources of finance, suppliers of materials, contractors and construction workers. The challenge therefore is to enable the multiple stakeholders to achieve improvements.


| Country | Approximate percent of budget related to housing reconstruction (GFDRR - Various PDNAs[2]) |
|---|---|
| Haiti 2010 | 53% |
| Nepal 2015 | 45% |
| Pakistan 2005 | 45% |
| Yogyakarta 2006 | 52% |

In many countries a high proportion of housing lies outside of formal regulatory systems, including historic buildings, rural and village housing, and urban informal settlements. After major disasters authorities frequently seek to review and strengthen enforcement of building codes, but the development and maintenance of the regulatory 'ecology' of institutions that support effective building code implementation is particularly difficult in housing. Achieving improvements and meeting required standards involves more than planning and building regulations. Compliance also requires knowledge of standards, access to affordable quality materials and adequate skills.

[2] www.gfdrr.org/en/post-disaster-needs-assessments

Improving housing and compliance with standards is not only the responsibility of enforcement authorities but also the responsibility of households, construction workers, financial service providers and wider society whose interest in the safety and durability of housing is heightened in the event of disaster losses. Measures to improve housing reconstructed after disasters should not only rely on enforcement but also seek to strengthen the wider housing system, including knowledge and skills, to contribute to continued risk reduction and improved practices in the longer term.

## Achieving sustainable change at scale remains challenging

Significant government and humanitarian financial and technical resources are mobilised to support housing recovery after disaster, but the results are falling short of expectations and assistance is failing to reach many households in time or at all. The majority of disaster-affected households reconstruct or repair their homes without guidance, reinstating the same construction deficiencies that contributed to building damages. Reasons include challenges for governments to act quickly and for humanitarian agencies to act collectively, contributing to inefficient and fragmented response, reaching relatively few households and communities and with limited lasting impact.

As disaster losses and rehabilitation needs become larger, and as government and assistance capacities and resources become more stretched, there is a need to seek greater efficiency and effectiveness, through more strategic approaches and through harnessing the potential of a wider range of actors than are currently involved, such as professional bodies, private sector companies and local media.

There are several examples of good practice in technical assistance for post-disaster housing reconstruction, but they are usually piecemeal and reach small areas or numbers of people. For instance, less than 10 percent of over 800,000 affected households reportedly had access to adequate technical assistance after the 2015 earthquakes in Nepal (HRRP 2018). When hundreds of thousands of houses are to be reconstructed at the same time, the challenge and the opportunity is to plan and implement large scale technical assistance that reaches very large populations and the entire areas affected. Large-scale technical assistance requires leadership and cooperation to harness available partners and resources, mechanisms to plan and implement pooled and dedicated funding, protocols to authorise and validate standards, curricula and public information, use of mass communication channels, monitoring and information management and measures to ensure coverage of continuous support over the duration of reconstruction.

*The challenge of scale is mirrored by the challenge of sustainability; ensuring building improvements are institutionalised and normalised on a broad scale in local construction practices for the longer term.*

## Better planning of technical assistance requires better understanding of technical assistance

The last decade has seen the development of a range of guidance informing recovery practice including: pre-crisis protocols, common methodologies for post-disaster and crisis assessments, recovery planning and implementation, at national and local levels. Institutional guidance for housing recovery tends to focus on the role of the government including regulatory and financial management. Humanitarian guidance tends to focus on the role of NGOs in

shelter response and in community level recovery implementation. There is no consolidated picture, articulating and guiding relationships between state and humanitarian actors and harnessing non-traditional actors including for example media and financial service providers. Broad coalitions can bring increased capacity, but may also bring risks of diverging approaches, misunderstandings, wasted efforts and resources. Developing consensus is essential to enable stakeholders to plan and work together in crowded and complex recovery situations based on agreed common principles and greater mutual understanding through articulation of respective roles and activities. Mechanisms for collaboration are essential to operationalise shared objectives and collective responsibility including joint budgeting to optimise resources and common systems to track progress and respond to needs.

*Source: Vero Wijaya/UN-Habitat.*

Current institutional and implementation guidance for housing recovery planning make generic references to technical assistance, but are insufficient to develop detailed plans or the systems required for comprehensive implementation. Technical assistance planning for recovery is commonly limited to individual government or humanitarian agency projects or single activities, without overall multi-year, multi-stakeholder, multi-activity plans from emergency to reconstruction for the overall affected population. Planning is piecemeal and funding is piecemeal. Without comprehensive budgeted plans, insufficient funds are mobilized for technical assistance. Without clarity on actual resources there is limited tracking of costs or evaluations of value for money. Without detailed plans, targets and indicators are poorly defined. The absence of plans, budgets and measurable evidence of the impact of technical assistance are all cited by donors as reasons why they are reluctant to fund technical assistance.

*Rebuilding local timber framed house after Hurricane Maria, Dominica. Rebuilding is relatively quick and strengthening the building is relatively easy.* ***Source:*** *Dave Hampton/IOM.*

Significant government, humanitarian financial assistance and private funding (including insurance) supports housing reconstruction but without associated funding or planning for technical assistance and quality assurance to accompany and safeguard donor investments or the resources mobilized by households. This displays a lack of understanding of the importance of technical capacity and a lack of appropriate mechanisms to plan for technical assistance. Ideally, predictable and adequate funding is mobilized for technical assistance at the outset of recovery, but compared to financial assistance and direct construction programmes, technical assistance has wide scope for flexible and incremental planning and budgeting. Technical assistance programmes can be strategic even with limited resources and can adjust in times of uncertainty or as resources become available. Large funding can be wasted if without consensus and collaboration, and scarce funds can be used more efficiently in conditions of informed decision making and collective action.

# Housing recovery policies

*Source: Conor Gallagher.*

Housing recovery policies, encompassing emergency and temporary shelter, housing repair and reconstruction and associated land and settlement recovery policies, set the direction and establish the rules for recovery stakeholders. They affect the decisions of all concerned and their lives for years to come. Successful policies can improve the efficiency and effectiveness of recovery processes and improve the quality and sustainability of recovery outcomes.

Guiding principles for policies on housing reconstruction were set out in 'Safer Homes Stronger Communities: A Handbook for Reconstructing after Natural Disasters' (GFDRR 2010) as follows:

- A good reconstruction policy helps to reactivate communities and empowers people to rebuild their housing, their lives and their livelihoods
- Reconstruction begins the day of the disaster
- Community members should be partners in policy making and leaders in local implementation
- Reconstruction policy and plans should be financially realistic but ambitious with respect to disaster risk reduction
- Institutions matter and coordination among them improves outcomes
- Reconstruction is an opportunity to plan for the future and to conserve the past
- Relocation disrupts lives and should be kept to a minimum
- Civil society and the private sector are important parts of the solution
- Assessment and monitoring can improve reconstruction outcomes.
- To contribute to long-term development, reconstruction must be sustainable
- The last word: Every reconstruction project is unique

See Appendix B, where the above guiding principles are elaborated.

In addition to the above principles, experience from recent housing recovery cases indicate housing recovery policies should have the following characteristics:

**Simple concepts and accessible terminology:** Housing recovery policy statements should be short and simple and expressed in accessible terminology to ensure they are fully, clearly and accurately understood and agreed by all stakeholders.

**Fixed goals but flexible paths to get there:** Policies should be based on fixed guiding principles which establish the goals, but accommodate flexible development and implementation of those policies, incorporating input from many stakeholders and responding to evolving challenges and opportunities.

**Timeliness:** Decisions including initial policies and subsequent revisions should be made and communicated in time to enable households and communities to make informed choices and to comply with policies. Financial and technical assistance should likewise be provided in time to facilitate compliance with policies and standards.

**Diversity and inclusiveness:** Policies must address the specific requirements of all affected households and their homes including rural and urban, historic and new, high and low income, high and low risk, owned and rented, single and multi-family households and homes.

**Address vulnerability:** Vulnerabilities and inequities can be exacerbated by the impacts of disasters. Policies should seek to reduce both by anticipating, monitoring and addressing challenges for those households and communities facing the greatest difficulties to recover their lives, rebuild their homes and reduce their risks.

**Don't let 'perfect' be the enemy of 'better':** Policies should promote achievable, incremental housing improvements to reach basic agreed standards for all disaster-affected households rather than ideal housing outcomes for only very few households.

Housing recovery policies need to be defined in terms of institutional strategies, reconstruction approaches, financial strategies, technical assistance strategies, and accountability strategies including systems for monitoring, evaluation, quality assurance and risk management.

# Guiding principles for technical assistance

The following guiding principles encapsulate these guidelines' advice and reflect some of the key concept that inform them, including collaboration, accountability, and sustainability.

1. *Everyone has a right to advice*
2. *Harness all capacity available to provide technical assistance*
3. *Be strategic to optimise scarce resources for maximum impact*
4. *Timing matters. Start early and sustain assistance*
5. *Action-plan and be flexible. Housing and technical assistance are iterative processes.*
6. *Adopt joined up approaches for multi-dimensional topics*
7. *Technical assistance is an investment in people*
8. *Local is more sustainable. Promote subsidiarity.*
9. *Take a long view. Learn from the past and prepare for the future*
10. *Aspirations are insufficient. Technical assistance strategies should be realistic and deliver*

*Source: Vero Wijaya/UN-Habitat.*

### 1. Everyone has a right to advice

The principle of protection safeguards the right of all of the population to appropriate advice to ensure their own safety and that of their families and communities. Advice needs to be accessible for those undertaking recovery and for those who may be at risk in future crises. State authorities, housing sector stakeholders, and assistance agencies are responsible for upholding the right to information as a matter of public interest. Full coverage of all areas and all populations should be the target.

### 2. Harness all capacity available to provide technical assistance

Technical assistance for all requires considerable capacity. Harness the skills and resources of all potential partners to plan and implement activities, at different levels, from different sectors, and across a range of topics. Build on existing systems and networks. Allocate tasks according to comparative advantage and expertise. Develop common tools and systems to support all partners. Partnership is greater than the sum of the parts, yielding dividends in coherence, consistency and durability. Lack of capacity is a challenge to technical assistance programming but so is fragmentation of the capacity and resources available.

### 3. Be strategic to optimise scarce resources for maximum impact

Choices have to be made to optimise the use of the scarce resources and capacities available for technical assistance. Strategic approaches are required at both the policy/central level and at the implementation/field level and should consider sequencing, how to accelerate recovery, how to address constraints and how investment can leverage and guide wider resources (funds, materials, capacities, efforts, institutions) to the most effective outcomes.

### 4. Timing matters. Start early and sustain assistance

Recovery starts immediately after a disaster with urgent demands for information. Start as early as feasible to analyse capacities, needs, and priorities and to plan and implement technical assistance. Mobilise partners and establish systems to incrementally develop and expand. Technical assistance approaches from development contexts need to adjust to accelerated timing in post-disaster contexts. Assume recovery will take several years and depend on the time required by households and communities to rebuild. Governments and humanitarian organisations frequently underestimate the time needed for recovery, withdrawing

assistance before many households have finished – or in some cases even begun – reconstruction. Sustaining assistance over the duration of recovery is as important as the early start.

### 5. Action plan and be flexible. Housing and technical assistance are iterative processest

Housing recovery is determined primarily by households themselves, choosing when, what and how to build according to their means, priorities and constraints. While authorities and support actors can devise policies and technical standards to guide recovery, they must also anticipate responding to evolving needs, by establishing mechanisms to monitor trends, and collect feedback. Technical assistance must be need-led and demand-led rather than supply-led. Circumstances change quickly and technical assistance has to be flexible. Action planning or iterative planning will be more effective than a rigid linear planning approach.

### 6. Adopt joined-up approaches for multi-dimensional topics

- Housing is multi-sectoral and multi-dimensional. Housing production involves physical, social and economic decisions. Guidance to inform households should accommodate a range of contexts, income levels, and preferences, and address concerns broader than structural safety including affordability, future extensions, modern services and energy efficiency.
- Compliance is multi-dimensional. Building better involves many components, including better design, better materials and better workmanship. Each requires strategies for improvement and quality assurance. Compliance relies on all components meeting required standards. Building inspection represents one regulatory mechanism to enforce standards, but compliance also depends on a web of incentive and penalty measures certifying professionals, quality assuring materials, and conditioning housing finance.
- Technical assistance is multi-dimensional: Support activities and inputs are most effective when coordinated and interlinked. Isolated and one-off activities have limited impact. Training linked to practical demonstrations and discussion sessions linked to information products to take away for reference are mutually reinforcing. Multiple communication channels sustain messages and build deeper understanding.

### 7. Technical assistance is an investment in people

Technical assistance programmes have multiple outcomes beyond safe reconstruction and repair of damaged buildings. Increased levels of public awareness, improved knowledge and skills among construction workers, and strengthened relationships between authorities and civil society should also be set as objectives and measured as indicators in technical assistance programmes. Individual, community, and institutional capacities have lasting impacts and recurring returns on investment. As a people-based activity, effective technical assistance requires understanding of social structures, cultural dynamics and communication as much as engineering knowledge.

### 8. Local is more sustainable. Promote subsidiarity

The sustainability of improvements promoted through technical assistance in recovery depends on their institutionalisation by local authorities, normalisation by the local construction sector, and internalisation by local communities. Promote and support local leadership and ownership from the outset to inform recovery and ensure post-recovery continuity. Recognise the value of local knowledge and skills to analyse local preferences and generate local solutions. Devolve decision making, resources, and responsibilities to the lowest local level that can reasonably discharge them.

### 9. Take a long view. Learn from the past and prepare for the future

Analyse how housing and settlements were produced and inhabited before the disaster. Learn how communities recovered from previous disasters, how resources were mobilised and how decisions were taken. Learn from the longer

term longitudinal studies of recovery outcomes to analyse the impact of technical assistance interventions. Anticipate future challenges including multiple hazards, the effects of climate change, and rapid urbanization to inform current and future recovery policies and continuous technical assistance activities. Plan for documentation of learning, institutionalization, transfer and exchange.

### 10. Aspirations are insufficient, technical assistance strategies should be realistic and deliver

**Disasters are described as windows of opportunities for change–for better standards, for safer housing, for more inclusive community mobilisation–reflected in idealistic recovery and technical assistance policies.** Such whole-scale change requires political momentum, resources and time, all of which are likely to be in limited supply. Unrealistic and unrealised ambitions for change will lead to frustration or dissipation of efforts. Watch the gap between aspirations and resources, and between aspirations and timeframes. Accountability to disaster-affected populations depends more on realistic planning, efficient use of actual resources and practical delivery of commitments by assistance stakeholders than aspirational policies and good intentions.

Partially improving 100 percent of housing to basic acceptable standards is a better outcome than reaching very high standards in only 5 percent of housing and involves a different approach to technical assistance: an approach that seeks to address large-scale.

# Recommendations for stakeholders

Mobilising a diverse range of stakeholders and optimising their respective mandates and capacities to plan and implement technical assistance is critical for successful housing recovery after disasters and to develop more resilient housing systems for the longer term. For simplification we categorise stakeholders according to their mandate and modus operandi in four broad groups referred to throughout this document.

| 4 main types of stakeholder groups | | | |
|---|---|---|---|
| Government | The built environment sector | Assistance agencies | Disaster-affected communities |

### Government:

All authorities mandated to plan, manage or support housing recovery.

- Examples of government stakeholders include: national recovery authorities, line ministries, local authorities, elected representatives, and international or regional governmental bodies or coalitions.

### The built environment sector:

All non-government actors involved in the normal production of housing, the functioning of housing markets, and in housing-recovery related activities.

- Examples of built environment stakeholders include: construction professional institutes (engineers, architects, surveyors, planners), construction professionals and companies, construction industry bodies, chambers of commerce, transporters, utility providers, financial service providers, communications and media, education and training providers, academia and research.

### Assistance agencies:

Organisations mandated to provide non-profitable financial, material or technical assistance to disaster-affected populations for housing recovery.

- Examples of assistance stakeholders include: individuals and organisations supporting housing recovery International bodies and organisations, donor and philanthropic funding partners, national and international non-governmental organisations, and civil society organisations.

### Disaster-affected communities:

Populations undertaking their own recovery.

- Examples of affected community stakeholders include: representatives of defined areas and defined groups, for example district committees, ethnic minorities, construction professionals, and women's groups.


*Cement vendor preparing for reconstruction. Indonesia.* **Source:** *UN-Habitat.*

*Rehabilitating water supply is essential for communities to return home after disaster and to provide clean water for construction.* **Source:** *UN-Habitat.*

**Source:** *Michelle Marrion.*

## Recommendations for key stakeholder groups

These general recommendations for the three key stakeholder groups -- government, the built environment sector and assistance agencies -- highlight priority actions that each might take, referring to their respective mandates and interrelationships, in order to optimise technical assistance planning and implementation in support of disaster-affected communities.

### Government:

Pre-disaster planning can improve post-disaster recovery. Ideally, institutional arrangements, financing mechanisms, sector policies and strategies are discussed, defined and agreed through pre-disaster planning for post-disaster recovery.

Pre-disaster recovery planning enables authorities to mobilise more quickly, using systems and agreements already in place. Post-disaster housing and settlement recovery is not only affected by disaster management planning, but also by the wider regulatory environment, including the status of census data, land use planning, building codes and enforcement.

- Mobilise and coordinate a broad coalition of partners: Recognise the capacity and expertise of all state and non-state stakeholders involved in housing recovery including central and local authorities, assistance agencies and built environment actors. Establish mechanisms to mobilise and coordinate partners, to discuss and confirm respective roles, and to build collaborative working relationships to plan and implement technical assistance strategies together.
- Develop an 'all-government' approach: High-level political leadership is vital to demonstrate commitment and inspire confidence after the shock of a major disaster. Housing recovery requires cross-departmental involvement of authorities, including those concerned with finance, land use, environment and social welfare. Empower local authorities and local representatives to use local knowledge and relationships to diagnose recovery challenges and to develop appropriate solutions through devolved institutional arrangements.

### Built environment sector:

- Recovery is everyone's responsibility: Supporting households and communities to rebuild their homes is not only the responsibility of state agencies and humanitarian agencies. Material producers, vendors, construction professionals, housing financiers and media are all responsible to disaster-affected populations; to inform and enable recovery and to reduce future risks.
- Access to finance affects housing outcomes: Access to finance can play as critical a role as access to technical advice in ensuring housing complies with standards. Appropriate financial products and services for all property statuses and income levels are required for timely and quality housing recovery and for a more resilient housing sector.
- Strengthen the housing sector: Recovery presents unprecedented opportunities to replace substandard housing stock and introduce sustainable changes for future housing and settlements. Housing expertise in land use planning, infrastructure, security of tenure, environmental performance, cultural heritage, disability and inclusion from professional, commercial and civil society may contribute to wider improvements beyond risk reduction.

### Assistance agencies:

- Coordinate humanitarian shelter and housing reconstruction: Coordinate humanitarian shelter response and housing reconstruction plans and resources to ensure early activities contribute effectively to later recovery outcomes. Ensure funding is allocated according to jointly agreed priorities over the anticipated duration of recovery.
- Empower local actors: Short-term and external assistance agencies should mitigate the risks of side-lining local and long-term agencies. Support and empower local actors including government, private sector and community-based organisations, by channelling resources, providing guidance and working in partnership.
- Promote a rights-based approach: Promote collective accountability among humanitarian agencies to safeguard the rights of all disaster-affected populations to appropriate information, guidance and assistance to rebuild safer and more sustainable homes and settlements. Contribute to improving recovery policies, programmes and systems for all as opposed to concentrating resources in ad hoc projects.

**Disaster-affected communities:**

- Organise, represent and communicate: The ability of communities to engage at the outset, and continuously through a recovery process, with decision-makers, can significantly affect the development of informed and appropriate housing recovery policies and programmes. Proactive, organised communities, who represent all local groups and interests, diagnose their needs and capacities and communicate their priorities can advocate more effectively.
- Seek transparency and accountability: Disaster-affected populations have a right to information about resources available to assist their recovery and how those resources are planned, used and accounted for. Demand mechanisms for transparency and accountability from governments and assistance agencies on funding, decision-making, programming and evaluations.
- Build a legacy for your children and grandchildren: Catastrophic disasters are historic opportunities for disaster-affected communities. Households, communities and their leaders have to take responsibility and make decisions to either reinstate vulnerabilities or to try to take the actions required to change course and to safeguard future generations.

*Family rehabilitating their home. Ecuador.* ***Source:*** *CRS.*

## Recommendations for all stakeholders

In addition to recommendations for different stakeholder groups, the following recommendations apply to all and emphasise common concerns.

- Learn by doing: Everyone involved in planning and implementing technical assistance after a disaster is learning on the job. Knowledge and skills are built through the shared experience of disasters and supporting recovery. Engineers will learn about politics; government officials will learn about media. External disaster experts will learn a new context. Local communities will learn new challenges and their abilities to cope.
- Communication and collaboration: Encourage and facilitate exchange of information, problems, opinions and experience at and between all levels of personnel, particularly through joint site visits and discussions. Support inquiry, piloting and review processes to optimise learning opportunities.
- Collaboration is more than an activity, it is an attitude: All recovery stakeholders are responsible to coordinate in order to be collectively accountable to the affected population. Ideally, stakeholders do more than coordinate; they collaborate, or work constructively together, taking joint responsibility to resolve issues. Collaboration is vital to building trust, developing consensus on objectives, optimising resources, and realising coverage, quality and flexibility in programme delivery. Collaboration is not only an activity. Collaboration is a necessary attitude to be adopted by all technical assistance stakeholders in all activities from the emergency through to post recovery.

# Related initiatives and organisations

These guidelines build on previous initiatives and link to current initiatives related to improving housing recovery. They provide practical guidance to operationalise commitments and aspirations in international agreements including the Sendai Framework and draw upon the knowledge and experience of dedicated local officials and organisations driving progress at field level.

## Institutional initiatives

The following initiatives are discussed in the next sections:

- UNISDR's Sendai Framework for Disaster Risk Reduction
- PreventionWeb
- The Global Facility for Disaster Reduction and Recovery (GFDRR)
  - Building Regulation for Resilience: Managing Risks for Safer Cities.
- International Recovery Platform
- Global Shelter Cluster: Promoting Safer Building
- Building for Safety

### The United Nations Office for Disaster Risk Reduction (UNISDR)

These guidelines respond to the Sendai Framework for Disaster Risk Reduction 2015-2030 (Sendai Framework), which recognizes that the State has the primary role to reduce disaster risk but that responsibility should be shared with other stakeholders including local government, the private sector and other stakeholders. The Sendai Framework calls for the coherent implementation and reinforcement of actions and commitments of different international agreements adopted in 2015-2016, namely: the Sendai Framework itself; the Addis Ababa Action Agenda (AAAA) on Financing for Development; Transforming Our World: the 2030 Agenda for Sustainable Development; the Paris Agreement on Climate Change; and the New Urban Agenda resulting from the United Nations Conference on Housing and Sustainable Urban Development (Habitat III). The Sendai Framework is the successor of the Hyogo Framework for Action 2005-2015 (HFA).

In 2013 AXA was invited to join the UNISDR Private Sector Advisory Group to contribute private sector expertise and to collaborate with the public sector and other stakeholders on disaster risk reduction. AXA has sought to provide its expertise in the context of the adoption of the Hyogo framework and the Sendai Framework, and was present at the UN World Conference on Disaster Risk Reduction in Sendai in March 2015 when the latter was adopted.

**Sendai Framework Priority 4: Enhancing disaster preparedness for effective response and to "Build Back Better" in recovery, rehabilitation and reconstruction.**

UNISDR has issued an implementation guide on build back better in recovery, rehabilitation and reconstruction as part of the series of Words into Action guidelines to operationalise the Sendai Framework. It provides advice based on experience to enable governments to estimate reconstruction needs with greater accuracy, establish more effective operational capacity, and pre-assign resources as required. The focus is primarily on pre-disaster measures and government roles, emphasising leadership, coordination, technical capacities and funding as key requisites.

## PreventionWeb

PreventionWeb, managed by UNISDR, is a web-based knowledge platform for disaster risk reduction, enabling access to a range of resource materials and promoting exchange between regulatory, advocacy and implementing stakeholders. The knowledge base includes event- specific collections that explore the lessons learnt from past disasters, what were the risk drivers, impacts and the efforts towards building back better.

- www.preventionweb.net/drr-framework/sendai-framework/wordsintoaction/build-back-better-recovery-and-reconstruction-4
- www.preventionweb.net/knowledgebase/past-disasters

Additional UNISDR guidelines and initiatives informing housing and settlement recovery include:

Words into Action Guidelines: Implementation guide for local disaster risk reduction and resilience strategies

- www.preventionweb.net/drr-framework/sendai-framework/wordsintoaction local-authorities
- www.unisdr.org/files/57399_drrresiliencepublicreview.pdf

ARISE: the UNISDR Private Sector Alliance for Disaster Resilient Societies

- www.preventionweb.net/arise

UNISDR Making Cities Resilient campaign

- www.unisdr.org/campaign/resilientcities

## The Global Facility for Disaster Reduction and Recovery (GFDRR)

The Global Facility for Disaster Reduction and Recovery (GFDRR) is a global partnership, managed by the World Bank. GFDRR contributes to the implementation of the Sendai Framework for Disaster Risk Reduction by helping countries to integrate disaster risk management and climate change adaptation into development strategies and investment programmes and to recover from disasters quickly and effectively.

The GFDRR strategy for 2018-2021 is available at:

- www.gfdrr.org/sites/default/files/publication/gfdrr-strategy-2018–2021.pdf

## Resilient Recovery

GFDRR's Resilient Recovery initiative helps disaster-affected countries assess damage as well as economic losses and needs, and plan recovery. The program supports governments to promote a "build back better" approach and strengthen recovery systems so that they are financially and institutionally prepared in the event of disaster.

This is achieved in close coordination with the United Nations (UN), the European Union (EU), and the World Bank, a partnership that has produced guides and tools for conducting post-disaster needs assessments (PDNA) and developing disaster recovery frameworks (DRF).

- General website
- www.gfdrr.org/resilient-recovery

- The GFDRR Recovery Hub consists of a set of guidance notes and references on key sectors.

www.gfdrr.org/recovery-hub

- Key publications available on the Recovery Hub include:

Resilient Recovery: An Imperative for Sustainable Development

www.preventionweb.net/files/44171_resilientrecoveryanimperativeforsus.pdf

Post-Disaster Needs Assessment Guide: Developed by the EU, UN, and World Bank Group, this guide provides a coordinated basis to help the governments of affected countries in recovery and reconstruction.

www.gfdrr.org/recovery-hub?sector=541

www.gfdrr.org/sites/default/files/2017-09/PDNA-Volume-A.pdf

Specific guidance for housing sector post-disaster needs assessment:

www.gfdrr.org/sites/gfdrr/files/WB_UNDP_PDNA_Housing_SP_FINAL.pdf

Guide to Developing Disaster Recovery Frameworks: Developed in collaboration with the EU, the UNDP and the World Bank, this guide assists governments in planning, prioritizing, and financing recovery programs to ensure resilience in recovery and development.

www.gfdrr.org/sites/default/files/2017-09/Disaster%20Recovery%20Framework%20Guide.pdf

www.gfdrr.org/sites/default/files/2017-09/Disaster%20Recovery%20Framework%20Process%20Notes.PDF

What did we learn. The Shelter Response and Housing Recovery in the First Two Years after the 2010 Haiti Earthquake (2016)

www.documents.worldbank.org/curated/en/699481494923590147/pdf/115025-WP-PUBLIC-haiti-what-did-we-learn.pdf

Safer Homes, Stronger Communities: A Handbook for Reconstructing after Disasters (2010)

www.gfdrr.org/en/safer-homes-stronger-communities-a-handbook-for-reconstructing-after-natural-disasters

Housing and Settlement Recovery Guidance (2017)

www.gfdrr.org/sites/default/files/2017-09/Housing%20and%20Settlements%20Guidance%20Note.pdf

Unbreakable: Building the Resilience of the Poor in the Face of Natural Disasters (2016): The impact of extreme disasters and climate change on global poverty and resilience policies including improved access to personal banking, insurance policies, social protection systems and infrastructure investments that could help people better respond to and recover from shocks.

www.gfdrr.org/en/unbreakable-building-the-resilience-of-the-poor-in-the-face-of-natural-disasters

Building Back Better: Achieving resilience through stronger, faster, and more inclusive post-disaster reconstruction (2018)

www.gfdrr.org/en/publication/building-back-better

### Building Regulation for Resilience: Managing Risks for Safer Cities

The Building Regulation for Resilience (BRR) Programme led by the World Bank GFDRR, supported by the EU, UN and JICA is a partnership of governments, international development institutions, and key public, private and non-governmental actors in the building sector aiming to improve building regulatory capacity using localized and calibrated approaches appropriate to low and middle-income countries.

The programme includes four components: 1 - National level legislation and institutions, 2 - Building code development and maintenance, 3 - Local implementation, 4 - Knowledge sharing and measurement.

The BRR programme is designed to work on long-term, systematic regulatory change, rather than rapid mechanisms in post-disaster situations. However, post-disaster technical assistance initiatives supporting housing and settlement recovery benefit from BRR programme learning.

www.gfdrr.org/sites/default/files/publication/Building_Regulation_for_Resilience_Managing_Risks_for_Safer_Cities.pdf

### International Recovery Platform

The International Recovery Platform (IRP) was established to support the implementation of the Hyogo Framework for Action (2005) by promoting resilient recovery and building back better. The platform acts as knowledge source and mechanism to share experience and build capacity including through its website.

www.recoveryplatform.org.

The IRP has developed sectoral or thematic recovery guidance notes including the Guidance Note on Recovery: Shelter (2010), presented as a menu of options for decisions makers, drawing upon a wide range of source cases.

www.recoveryplatform.org.

www.unisdr.org/files/16770_16770guidancenoteonrecoveryshelter.pdf

### Global Shelter Cluster: Promoting Safer Building

The Global Shelter Cluster (GSC) is an Inter-Agency Standing Committee (IASC) coordination mechanism that supports people affected by disasters and internally displaced people affected by conflict with the means to live in safe, dignified and appropriate shelter. The GSC enables better coordination among all shelter actors and promotes better shelter practice including through information-sharing on the GSC website and through thematic working groups of GSC member organisations.

www.sheltercluster.org

Global Shelter Cluster (2018) The State of Humanitarian Shelter and Settlements 2018. IFRC UNHCR Geneva.

www.sheltercluster.org/sites/default/files/The%20State%20of%20Humanitarian%20Shelter%20and%20Settlements%202018.pdf

The GSC Promoting Safer Building working group aims to improve the technical assistance and support offered by the humanitarian shelter sector to disaster-affected people, including through action research to understand how people self-recover and research on the potential of local building cultures to inform housing recovery after disaster.

The GSC Construction Standards working group aims to develop harmonised sets of non-technical standards to inform humanitarian agency positions on construction in contexts with weak regulatory frameworks including building codes.

The GSC primarily focuses on humanitarian shelter agencies and shelter activities, which may complement guidance for a wider range of actors (e.g. government, private sector) and longer-term housing recovery.

- www.sheltercluster.org/working-group/promoting-safer-building
- www.promotingsaferbuilding.org
- www.craterre.org/recherche
- www.sheltercluster.org/working-group/construction-standards

### Building for Safety. Cambridge Architectural Research and the Oxford Centre for Disaster Studies

The 'Building for Safety Project' was a landmark research and dissemination initiative, conceived as a contribution to the International Decade for Natural Disaster Reduction (IDNDR 1990), formulating guidelines for training indigenous construction workers in seismic hazard-resistant construction of low-income dwellings and settlements. The project sought to address the specific challenges involved in improving non-engineered building.

The four sets of guidelines are: Communicating Building for Safety (1993), Building for Safety Compendium (1994), Technical Principles of Building for Safety (1995), and Developing Building for Safety Programmes (1995), published by the Intermediate Technology Development Group (ITDG).

The Building for Safety guidelines link social and physical sciences and go beyond advocacy to provide practical advice and tools for a range of interrelated activities, particularly in promoting public awareness.

While the principles and approaches in the Building for Safety guidelines remain relevant, over the twenty years since they were issued, new challenges and opportunities have emerged, for example: international agreements on disaster risk management frame the actions of an increasingly diverse range of recovery stakeholders and digital technologies have revolutionized media, communications and access to information.

- www.iitk.ac.in/nicee/wcee/article/2163.pdf

## Learning from practice

Many government and civil society organisations (including NGOs, academics, social enterprises), lead in the theory and practice of technical assistance to enable affected populations reduce housing and settlement vulnerability to environmental challenges and disasters.

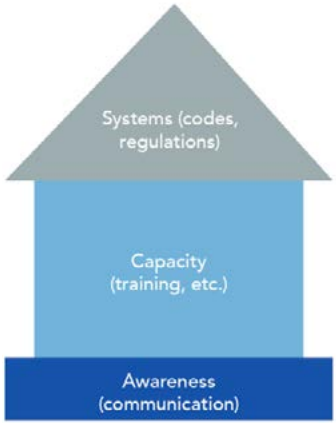
Their guidance has been invaluable in the preparation of these guidelines. We highlight examples from their work in case studies provided in the following chapters and encourage you to visit their website to track their continuing work and publications.

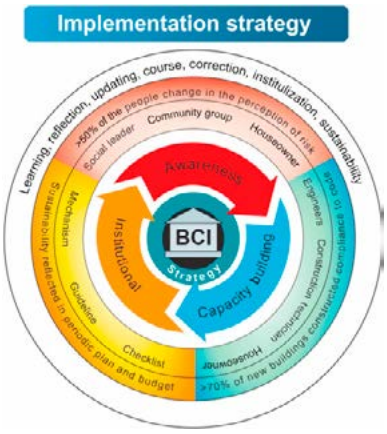
### National Society for Earthquake Technology Nepal (NSET)

The National Society for Earthquake Technology (NSET) Nepal was founded in 1993 by Nepali technical professionals to assist all communities in Nepal to become earthquake-safer and to contribute to regional and global risk management

efforts. To execute this mission, NSET has developed innovative initiatives promoting greater links between science, education, engineering, government and communities. NSET programmes include community-based risk awareness, post-disaster reconstruction and building code implementation, all using action-research approaches. NSET describe technical assistance strategies as comprising three inter-related domains of activity:

| | | Stakeholders | Activities |
|---|---|---|---|
| Institutional development | System | Reconstruction authority<br>Line ministries<br>Local authorities | Policies<br>Advocacy and training<br>Tools and guidelines |
| Capacity building | Capacity | Technical professionals<br>Social professionals<br>Local authorities | Training<br>Tools and guidelines |
| Raising awareness | Demand | Households<br>Community groups<br>Elected officials and local leaders<br>Local authorities | Orientations/ interaction<br>In community activities<br>Demonstration buildings<br>Publications |




The NSET technical assistance 'house' diagram describes awareness as the foundation or base, capacity as defining execution and systems as the roof or completion. The NSET technical assistance strategy 'wheel' diagram describes the same components as mutually reinforcing or iterative.

NSET conceptualization of technical assistance may inform long-term risk reduction initiatives or may inform rapid planning for reconstruction after a disaster, highlighting consistent factors underpinning the processes of achieving effective and durable improvements.

www.nset.org.np

### Swiss Cooperation for Development SDC

Swiss Humanitarian Aid Unit

Disaster risk reduction, emergency relief, and reconstruction are three fields of activity of the Humanitarian Aid of SDC. This corresponds to the work that needs to be done before, during and after a crisis, armed conflict or disaster. Prevention refers to all of the measures taken in terms of protection of the population and infrastructure. Hazard prevention and vulnerability reduction are part of sustainable development and are promoted in all SDC projects and programmes.

SDC carries out research, develops training curricula and learning materials, implements training, develops public information and carries out awareness campaigns in support of governments, built environment professionals, assistance agencies and affected communities in recovery after disasters.

- www.eda.admin.ch/deza/en/home/themes-sdc/disaster-reduction-relief__reconstruction/disaster-risk-reduction.html
- www.shareweb.ch/site/DRR/Pages/default.aspx
- www.shareweb.ch/site/DRR/Documents/Types%20of%20activity/SDC_Guidelines_on_DRR_April_2018.pdf
- www.developmentbookshelf.com/doi/pdf/10.3362/9781780449883

### Inter Action

Inter Action collaborates with thousands of professionals from member and partner organisations to mobilize the NGO community, enhance its impact, align common interests, and promote learning and innovation. Focus areas include shelter and settlement and disaster risk management, in crisis response recovery and development.

- www.interaction.org

### International Federation of the Red Cross and Red Crescent Societies

- www.ifrc.org/en/what-we-do/disaster-management/responding/services-for-the-disaster-affected/shelter-and-settlement

### Shelter Centre and Humanitarian Library

Shelter Centre supports all stakeholders from all sectors in technical learning through the inclusive Shelter Meeting community of practice, supported by the Humanitarian Library, responding to the transitional settlement and reconstruction following conflict and natural disasters

- www.sheltercentre.org
- www.humanitarianlibrary.org

### Catholic Relief Services

- www.crs.org

### Development Workshop

- www.dwf.org

### Practical Action

- www.practicalaction.org

### Asian Disaster Preparedness Centre

www.adpc.net/igo/Default.asp

### All India Disaster Mitigation Institute

www.aidmi.org/Index.aspx?AspxAutoDetectCookieSupport=1

### The Earthquake Engineering Research Institute

www.eeri.org/eeri-projects-overview-and-search

### The World Housing Encyclopedia (WHE)

www.world-housing.net

### Active Learning Network for Accountability and Performance (ALNAP)

www.alnap.org/about

www.alnap.org/help-library/disaster-interventions-and-humanitarian-aid-guidelines-toolkits-and-manual

### Overseas Development Institute

www.odi.org

### The Centre for Development and Emergency Practice (CENDEP)

www.brookes.ac.uk/architecture/research/cendep

### Build Change

www.buildchange.org

### Habitat for Humanity

www.habitat.org/emea

### Internews

www.internews.org

### BBC Media Action

www.bbc.co.uk/mediaaction

*Source:* *UN-Habitat.*

# PART B
# WHAT TECHNICAL ASSISTANCE: THEMATIC CHAPTERS

*Houses, workshops, and community buildings damaged by the 2015 earthquake in the historic town of Bungamati, Nepal. 2015.*
**Source:** *Shelter Cluster Nepal.*

# CHAPTER 1
# Determining factors for housing recovery and technical assistance for housing recovery

Every disaster is unique, every recovery is unique. Disaster characteristics, context and response capacity influence recovery and are explored as factors framing decisions at all levels and all stages from government shelter response and housing recovery policies to household decisions on how to rebuild.

These guidelines propose guiding principles and provide ideas to plan and implement technical assistance activities to inform the development of technical assistance strategies in a range of unique post-disaster situations. This guidance, along with best practices and lessons learned from other disasters, must be weighed with analysis of the wide variety of local factors in order to arrive at strategies that are most appropriate for each new case.

# Factors affecting housing recovery

## Disaster characteristics

### The type of disaster

Different types of disasters affect the natural and built environment differently as well as the perceptions of risk and priority concerns in reconstruction:

- **Geo-hazards:** Earthquakes can completely destroy or seriously compromise the structural integrity of buildings. Damage varies per individual building. Earthquake-related liquefaction or tsunamis can also cause structural damage. Sudden catastrophic damage and continuing aftershocks may heighten fear among the population.
- **Meteorological:** Cyclones (hurricanes, typhoons) cause structural damage to individual buildings. Damage may be experienced over a wide area of impact. Flooding is likely to affect settlements or groups of buildings.
- **Sudden, recurring or slow onset:** Sudden catastrophic earthquake damage and continuing aftershocks may heighten fear. Frequently recurring disasters may generate awareness among the population and inculcate mitigation measures. Cyclones, heavy rain and flooding may be seasonal or advance warnings may be communicated by meteorological services, enabling preparedness.
- **Heat, cold and drought:** Disasters such as drought might not have a direct impact on housing but may affect infrastructure or may trigger displacement. Events of extreme heat or cold can lead to higher levels of morbidity and mortality if housing is not adequate, and may thus require housing improvements.
- **Beyond housing damage:** Flood risk is generally better addressed through land-use planning or mitigated by infrastructure or watershed management than by trying to flood-proof individual houses. Entire sites or settlements may be destroyed by flooding or landslides, or rendered uninhabitable due to extreme risk, resulting in permanent displacement and relocation as a first step in housing recovery. Different disasters have different impacts on access, infrastructure damage and agricultural livelihoods with consequent differences in prioritization of activities and resources by governments, households and communities, with implications for housing reconstruction.

### The scale of disaster

- **Absolute and proportional:** The scale of a disaster's impact is described in absolute numbers and as proportions (e.g. proportion of local and national area, population, GDP, etc.). The proportion affected is likely to be a factor in the capacity of a community to cope with emergency shelter needs and the capacity of markets to meet recovery needs.
- **Effects:** Disaster effects are measured in terms of physical infrastructure and assets, impacts on the production, delivery of and access to goods and services, effects on governance, and effects on risks and vulnerabilities. The scale of a disaster refers to the consequences of the effects of the disaster in terms of damage and disruption, with short- and longer-term implications for the economy and society.
- **Direct and indirect:** Disaster impacts can be direct or indirect, for example, damage to urban areas may affect service supply to rural areas. Conversely, disasters in rural areas may affect food supply to urban areas, or building material supply from one area to another. The calculation of impacts therefore requires estimations based on a range of scenarios over a protracted recovery time frame. (UNDP 2014).

### The timing and duration of disaster

When a disaster occurs, the time of year, including the season, the possibility of rain or extreme temperature, protracted inundation, or delayed debris-removal, will impact plans for emergency and temporary shelter and on the housing rehabilitation and reconstruction process. Building seasons may be constrained by climate factors, such as low temperatures or dry seasons, or by competing livelihood priorities. The time required to restore access and markets, to prepare damage and risk assessments, policies and programmes for reconstruction including relocation or urban planning, may all affect the timing, the duration and pace of housing recovery.

## Characteristics of the context

Context describes the situation in which a disaster occurs, that can help explain the impacts and the circumstances of recovery. Context refers to the characteristics of production, management and use of housing and settlements, understanding of which are necessary to inform recovery planning.

### Physical environment

- **Location:** geographically diverse or homogenous, remote or accessible, mountainous or low lying, type of agriculture, level of environmental degradation, level of vulnerability to various hazards. Climate, annual temperatures, and precipitation.
- **Settlement type:** dispersed rural, villages, large urban areas, historic or new urban, high or low density, level of infrastructure, level of planned and regulated development.

### Built environment

- **The typology of housing stock:** size, main construction materials and technologies, quality and condition (e.g. single story, multi-story, reinforced concrete, adobe, timber frame, hybrid), housing services. Land costs, construction costs, housing utility costs, and rental costs. The proportion of household income normally spent on housing costs and normal duration for house construction, including incremental construction.
- **Land and housing tenure:** ownership, state, commercial and petty landlords, long-term leaseholders, informal settlement occupants, refugees or other status.

Typologies of land tenure may include statutory, customary, religious or informal.

- **Built environment sector:** normal rates of housing production (per annum), material sources, importation, extraction and production type and capacity, plant and equipment, distribution networks, building professionals, contractors and labour capacity including knowledge and skill levels, access to housing finance sources, terms and conditions, and participation in housing insurance.

### Household and social structures

Nuclear and extended (joint) family households, household size, roles of elders, women, men, youth, livelihood patterns, migration of household members, role of diaspora, social support networks, cultural practices, religious beliefs, literacy and education levels, participation in community activities, representation in formal and informal community structures, levels of social cohesion or tension, minority groups, and exclusion.

### Economic development

Level of economic development, levels and diversification of savings and incomes, participation in banking and insurance, access to credit, levels of debt, remittances, support by formal and informal social safety nets, levels of economic inequality, income and wealth redistribution, recurring experience of disasters eroding coping capacity and development gains.

### Governance

- **Political systems:** leadership, stability, operational and fiscal decentralisation, representation, transparency and accountability, mechanisms for fiscal mobilisation and distribution.
- **Regulatory systems:** policies, legal and regulatory systems guiding land use, planning, the production and management of housing and settlements, including building codes, enforcement mechanisms and levels of compliance, building material quality assurance mechanism, certification and registration of building professionals and contractors, and housing financial services.
- **Administrative systems:** magnitude and capacity (technocratic and administrative) of central and local government to deliver on its roles and responsibilities.
- **Non-state:** leadership, regulation, magnitude and capacity of commercial and civil society institutions and organisations including professional institutes, academia, trade unions, chambers of commerce, and media.

## Response capacity

Response capacity describes the institutional, human and financial resources and capacities available and required to plan, manage and implement housing recovery.

- **Disaster damages and losses:** personnel, premises, operational capacity, data, temporary functioning, and longer-term rehabilitation.
- **Financial capacity:** total levels of funding allocated to post-disaster emergency response and recovery, profile of funding by source, by sector and stakeholder group, terms and conditions attached to post-disaster funding, including geographic distribution, time frames and ring-fenced outputs, participation in disaster insurance, access to institutional and commercial credit.
- **Human resource capacity:** deployment of dedicated personnel to plan and implement recovery activities, levels of expertise and experience.
- **Regulatory mechanisms:** legal, regulatory and institutional measures to establish, staff and operate recovery authorities, to regulate financial services, material producers and certify contractors and professionals, to approve assistance agencies and projects.
- **Political and institutional capacity:** Capacity to provide timely and effective leadership and decision-making in support of housing recovery within and between state authorities and non-state stakeholders.
- **Production capacity:** Capacity for rehabilitation, expansion and improvement of material supply, labour supply and finance to implement housing recovery, including availability of affordable quality materials and adequate knowledge and skills to execute compliant construction standards.
- **Assistance agency capacity:** Presence, capacity and acceptability of national and international assistance agencies and community-based organisations, operational before the disaster or newly arrived after the disaster. Presence includes geographic location and coverage of premises, personnel and projects. Capacity includes sector expertise and experience, local knowledge and credibility, human, material and financial resources.
- **Affected population coping capacity:** Ability to mobilise finance and materials, levels of knowledge and skills to manage reconstruction, levels of social organisation and positive engagement with authorities. Community capacity may be built through previous experience of disasters and recovery, preparedness for disasters, understanding of risk and through mechanisms for collective decision making, planning and implementation.

## Flooding

Flooding may involve minor clean-up operations or complete re-establishment of settlements and infrastructure, and reconstruction of houses. Communities may be displaced for protracted periods due to continued inundation, loss of livelihoods, or damage to infrastructure, rendering areas uninhabitable and affecting the timing of housing recovery. For the majority of communities, flood risk needs to be addressed at settlement level rather than individual house level through site selection and planning regulations, improved natural resource and watershed management, and through mitigating infrastructure works. Decisions for settlement recovery and risk reduction may be made, and works implemented, before, during, or after housing reconstruction decisions and implementation.

*Coastal flooding in Peru caused minor building damage, recovery involving mainly cleaning and rehabilitation of infrastructure.* **Source:** *IFRC.*

*Major damage from cyclone Idai in Mozambique caused extensive agricultural losses to livelihoods and required complete reconstruction.* **Source:** *CRS.*

*Standing water damage to concrete and brick masonry building.* **Source:** *UN-Habitat.*

*Standing water damage to adobe and mud masonry buildings.* **Source:** *UN-Habitat.*

## Flooding

*Communities displaced by flooding for two months to elevated roads close to the site of their previous homes.* **Source:** *UN-Habitat.*

*Flood recovery involved rehabilitation of boundary walls and improved area planning and drainage.* **Source:** *UN-Habitat.*

*Mason pointing fired brick foundations for house reconstruction on raised platform in an effort to mitigate flood damage to the new house. The area has been affected by severe floods three times in ten years.* **Source:** *UN-Habitat.*

*New Jersey shore reconstruction after hurricane Sandy.*
**Source:** *Ira Wagner.*

## Damage impacts and recovery contexts

*Clearing access for the road and to property after slides. Guatemala.* **Source:** *CRS.*

*Streets filled with debris in Muzaffarabad for several months after the 2005 Kashmir earthquake.* **Source:** *Sheikh Ahsan Ahmed.*

*Damaged reinforced concrete building, impossible to repair and complex to retrieve salvage materials.* **Source:** *GOAL.*

*Roof timbers removed from flooded houses and stored for reuse in Hunza. Good quality timber is scarce in the area and very valuable.* **Source:** *UN-Habitat.*

## Damage impacts and recovery contexts

*Entire neighbourhood destroyed in 2010 earthquake, Port au Prince, Haiti.* **Source:** *UN-Habitat.*


*Individual building failure. Top story pancaked onto the three lower stories.* **Source:** *Shelter Cluster.*

*Existing informal neighbourhood, increasing in population and density after the earthquake with added floors and other extensions. All pre-earthquake buildings. This is also the site of recovery as many earthquake-affected families moved to this neighbourhood to rent a new home. Technical assistance is also required in neighbourhoods that are not destroyed. Haiti. Jalousie.* **Source:** *UN-Habitat.*

*Completely new neighbourhood established after the earthquake. All post-earthquake buildings. This is also the site of recovery as over 200,000 people, including urban and rural earthquake affected families moved to Canaan to acquire land and build new homes. Technical assistance is also required in previously unbuilt areas where development is rapid and where introducing improvements early in the construction process can have a significant impact. Haiti. Canaan.* **Source:** *UN-Habitat.*

# Factors affecting technical assistance for housing recovery

The following factors inform the development of housing recovery policies and programmes and affect the efficiency and effectiveness of technical assistance activities.

## Context and operating environment

- Geographical factors affect whether and how technical assistance reaches affected households and communities, depending on total area, type of terrain, infrastructure and accessibility, urban or dispersed rural settlement types. Geographic factors will also affect the timing and pace of reconstruction with implications for the timing and cost of technical assistance.
- Pre-disaster housing and construction types, size and cost affect the reconstruction process, the time and resources required, housing adequacy or vulnerabilities will inform demand for improvements.
- The type and scale of disaster affects the type and level of damage to housing and infrastructure as well as disruption to markets and livelihoods.

## Scope of technical assistance

- The scope of technical assistance is largely driven by how 'building back better' (BBB) is defined in recovery policies and programmes. BBB may aim for sectoral reforms or may be limited to safer construction. The scope of 'safer' construction depends on the pre-disaster construction types and vulnerabilities, the range of hazards and level of risk, all of which may require minor or major changes to standards, technologies, costs and skills.
- Better housing may involve improvements at house and/or at settlement levels. Risk assessment, risk mitigation, relocation, (re)planning, infrastructure, and tenure securitisation for example, require different technical expertise and assistance activities to hazard resistant construction. Likewise, a wider range of housing improvements require various expertise and activities to support improvements to household water, sanitation and energy performance.
- 'Better' recovery may involve 'better' processes of engagement, decision making, inclusion, gender sensitivity and accountability, all of which require technical assistance inputs into policies, curricula and activities.
- If housing recovery policies aim to strengthen institutional, construction market and professional systems, technical assistance will implicate a wider range of expertise, activities and stakeholders and political processes to deliver institutional and regulatory change.
- Housing recovery support, including technical assistance strategies, requires balance between delivering on short-term outputs and long-term aspirations, between individual household and community level, and between public and private sector, government and non-government investment and activities.

## Institutional arrangements

- **Pre-disaster status:** the pre-disaster status of settlements, housing and construction and adequacy of associated regulatory mechanisms, including levels of compliance, affect plans for housing recovery. Building codes may require minor revisions or extensive preparation. Building inspection may require surge capacity or to be established where not existent.
- **Role of government:** the role of government in housing recovery, including financial and technical assistance, by a dedicated recovery authority or by existing line and local authorities and the respective roles of non-governmental stakeholders will affect the planning and implementation of technical assistance.
- **Governmental capacity to mobilise partners:** the ability of government to mobilise partners will affect the capacities and resources available and their use. The presence or absence of mechanisms for coordination and planning by government, the built environment sector and assistance agencies will affect the prospects for coverage, consistency and quality of technical assistance.

## Technical assistance capacity

- Technical assistance aims to ensure there is sufficient awareness and skills to execute adequate rehabilitation and reconstruction. The pre-disaster level of knowledge among the population and competencies among construction professionals and workers will determine the scale and types of deficits to be addressed through technical assistance.
- Pre-disaster efforts to promote risk reduction, building code compliance, sustainable housing and settlements, participatory planning and similar initiatives may provide a foundation for technical assistance for recovery. Pre-disaster community organisational capacity also provides a foundation for engagement with technical assistance initiatives.
- Government authorities and assistance agencies are commonly accounted for as sources of manpower and expertise. Potentially large capacity may also be found among professional institutions, trade unions, academia and private companies, across a range of topics from engineering to finance to communications.

## Funding for technical assistance

- The impact of the disaster and needs for recovery are determined across all sectors. Funding for housing recovery depends on the extent of other needs as well as the resources available. Housing recovery budgets account for the following components: shelter, housing, land, settlement and technical assistance, with wide variations across different disaster recovery situations.
- Large scale financial assistance or insurance payment schemes may be planned with associated investment in technical assistance to ensure the population are adequately informed of and enabled to meet financial terms and conditions including compliance with building codes.
- Technical assistance budgets include running costs (salaries and personnel costs, rent, communications,

transport) and capital costs (equipment, construction, radio time). As running costs are a major factor, the duration of assistance programmes is a critical factor. Planning for technical assistance needs to take account of cost-effectiveness considering the scope, capacities and resources available and informed through continuous monitoring.

- The source of funding for technical assistance affects who can use it and for what purposes, for example, funding may be available to non-government agencies who are not permitted to transfer funds to government, or funding may be limited to emergency time frames or activities. Ideally, there is clarity on budgets (amount, source, terms and conditions) for technical assistance from the outset. In practice, clarity on resources and associated planning emerges incrementally. Technical assistance is adaptable according to resources available and phasing. The degree of flexibility in the use of funds, coordination in identifying priorities, and strategic planning of efficient activities may be as critical as the amount of funding available.

## Timing and duration of technical assistance

- Two key timing issues affecting technical assistance are 1) when will housing recovery start, and 2) how long will housing recovery take:
  - Factors affecting the start of recovery include: displacement, completion of temporary shelter arrangements, policy and regulatory decisions and delays due to resource constraints
  - Factors affecting the duration of recovery include: housing type and the pre-disaster normal time required for construction, economic capacity, access to credit, policies and regulatory decisions, material and labour market functionality and resource constraints.
- Technical assistance responds to different needs at different phases of recovery. Early activities may include damage assessment, revision of codes, and development of curricula. Later needs may include grievance redressal, maintenance plans and institutionalisation. Sequenced plans may be outlined at the outset, but will also rely upon regular review and course revisions to respond to challenges and opportunities arising during recovery.
- In contexts where recovery is expected to take several years, including complex urban situations, sustained technical assistance may be required for over a decade.

## Sustainability of improvement measures

- Technical assistance may be narrowly planned to replace assets (houses), or may be more broadly planned with objectives to develop institutions and to change housing practices and cultures of compliance in the future.
- Post-disaster recovery including technical assistance for housing recovery can be managed by a dedicated reconstruction agency or can be managed through the existing central and local authorities, with implications for the sustainability of systems developed to promote compliance, and systems for information management and social safety nets. Institutional sustainability depends on staffing or outsourcing of activities, exit plans, transfer plans and appropriate legislation.
- Apart from improved housing reconstruction, strengthened human resource capacity is a key output of technical assistance activities, which may be subsequently lost, underutilised or continue to be deployed to contribute to the development of the built environment and risk management.

## Case Study
## Technical assistance for housing recovery after Hurricane Matthew 2016, Haiti

In 2016, Hurricane Matthew caused extensive damage in mountainous, rural areas of Haiti, where houses are generally single-story and constructed with rudimentary timber frames and infilled masonry walls. Technical assistance for housing recovery through information campaigns and on-site advice focused on simple strengthening of roofs with bracing and hurricane straps, and hurricane and earthquake-resistant basic masonry where entire buildings needed to be replaced.

Mobile carpenters were able to provide advice and assistance to a large number of households for both repairs and reconstruction, early and quickly. All materials were available locally, but transportation was expensive, and many families extremely poor. On-site demonstrations and advice enabled households to make their homes safer through prioritising affordable strengthening measures according to their means.

*Typical rural house damaged by Hurricane Matthew. Haiti.*
**Source:** *CRS.*

*A mobile technical assistance team carries out repairs and strengthening on a damaged verandah roof.* **Source:** *CRS.*

*Carpenter installs hurricane straps.*
**Source:** *CRS.*

*Fully reconstructed new house.*
**Source:** *CRS.*

## Case Study
## Urban historic housing and settlements; complex technical, social, and economic issues in recovery

Historic city centres have suffered extensive damage in recent earthquakes in Indonesia, Haiti, and Nepal. These centres housed large populations, often in mixed-use residential and commercial buildings, and faced complex challenges for recovery.

Land and property ownership is complicated by informal status, multiple claims and adjoining conditions. Buildings generally do not comply with formal regulations. Housing often accommodates renters and is poorly maintained or serviced. The materials and skills to conserve, repair, or rebuild in the same techniques may not be available. The socioeconomic basis for the area and for the building types has changed over time, and a future for the area or for new buildings is likely to be contested with diverging views among stakeholders.

The historic centres of towns or large cities may have already been in decline for several years and this process may accelerate due to disaster, as buildings collapse, families move out, and investment moves to new premises. The loss of historic centres is not only an individual issue for each property owner, it is also a collective loss for wider society and future generations. Furthermore, the focus of cultural heritage recovery tends to be on monuments and public buildings, while housing and streets are neglected.

Efforts to retain and reuse the built heritage that historic housing and settlements represent require sophisticated technical expertise, often drawing upon experience from conservation, architectural, engineering, and material specialists. In addition, recovery programmes require further expertise in urban regeneration, including political, legal, planning, infrastructure, finance and economic development, social engagement, and community development.

These skill sets exist in many cities around the world and among built environment professionals and academia. Despite awareness that disaster recovery will increasingly take place in urban contexts, there has been limited progress to help disaster-affected cities develop appropriate policies and programmes to mobilise appropriate resources, or to deploy expertise to support housing recovery in historic centres.

*Houses, workshops, and community buildings damaged by the 2015 earthquake in the historic town of Bungamati, Nepal. 2015.* **Source:** *Shelter Cluster Nepal.*

*New reconstruction after the 2015 earthquake in neighbourhood of Patan, Nepal. Sites are difficult to access and new construction affects adjoining historic buildings.* **Source:** *Shelter Cluster Nepal.*

*Historic shop houses damaged by 2009 earthquake in the centre of Padang, Indonesia. Mainly absentee property owners.* **Source:** *UN-Habitat.*

*Historic city centre Port au Prince, where population and building condition decline accelerated after the 2010 earthquake. Businesses and investment moved out to suburbs after the earthquake, as plans for the city centre failed to gain consensus or funding.* **Source:** *UN-Habitat.*

*Visit to demonstration house and information event to learn safer construction standards and practical application.*
**Source:** *Internews.*

# CHAPTER 2
# Institutional arrangements and stakeholders

The management of the recovery and reconstruction process following a major disaster presents massive and complex challenges to any country, especially those with limited experience of disasters and those with limited institutional capacity. This chapter analyses options for the leadership, coordination and management of post-disaster housing reconstruction at national and local levels and in the context of the larger disaster management institutional framework. Institutional arrangements include mechanisms to define and ensure adherence to housing recovery policies, strategies and regulations, to mobilise and coordinate stakeholders and resources and to assure quality and accountability. This chapter further explores the wide range of stakeholders including government, built environment sector, assistance agencies and affected populations and options for their respective roles and responsibilities in relation to institutional arrangements.

## Why does it matter?

Post-disaster situations are frequently described as 'chaos' or periods of uncertainty. Uncertainty can be reduced by establishing and communicating institutional arrangements for recovery early. Regulatory and implementation arrangements need to be clear to individuals and organisations, building trust and confidence inter-governmentally as well as for donors, households, and the public.

Housing and settlement recovery involves the greatest number and range of stakeholders including government authorities, across the construction and finance sectors, in addition to multiple communities and households, each concerned with decisions regarding their homes and futures. How various stakeholders are involved in devising and implementing housing and settlement recovery policies and programmes is determined by institutional arrangements.

Disasters and recovery commonly trigger acceleration and proliferation of decision making and changes regarding standards, housing practices, financial services and information management systems. Managing change processes, including adapting for recovery and developing longer term resilience, is a central concern for State and non-State institutions.

## Strategy for institutional arrangements

### Assess damage and losses and capacity and needs of local institutions:

- Assess pre-disaster government capacity related to premises, personnel (numbers and expertise), funding, and existing policy and regulatory systems at central and local levels.
- Assess post-disaster capacity/disaster impacts on government functionality (e.g. premises, personnel and data).
- Assess requirements for temporary and restoration of government functionality, including temporary structures, rehabilitation of damaged, or reconstruction of new premises.
- Assess requirements for strengthening or expanding government capacity to manage recovery, including temporary capacity and activities.
- Assess pre- and post-disaster capacity, requirements for restoration or

expansion of built environment sector, including production capacity, premises, personnel, funding, policy and regulatory systems.

- Assess pre and post-disaster capacity, requirements for restoration or expansion of assistance agencies, including presence, programmes, personnel, funding and regulation.

### Develop a sequenced plan based on actual resources:

#### Based on the above assessments develop sequenced plans to:

- Restore immediate or temporary government, built environment and assistance operations.
- Mobilise potential stakeholders and resources (government and non-government).
- Define institutional arrangements to manage recovery and communicate those arrangements.
- Develop institutional capacity to manage recovery, including upskilling of existing personnel, recruitment, and training of new personnel.
- Define strategies for institutionalisation of regulatory measures and/or exit strategies for recovery arrangements.

### Establish systems for coordination, information management, monitoring and evaluation.

### Information management systems to support data on and analysis of:

- Institutional arrangements and procedures, roles and responsibilities, locations, and contact persons, for government, partners and the public.
- Government and non-government stakeholders, including institutional support and capacity building.
- Resource allocation and disbursement.
- Proposed and actual projects' location, timing and activities.

### Monitor and evaluate:

- Monitor institutional capacity, including premises, staff numbers, knowledge and competencies, operating systems, and funding.
- Monitor institutional performance, including decision making, availability of services, transparency and accountability.
- Monitor recovery activities, progress and results.
- Evaluate efficiency and effectiveness of institutional arrangements, coordination and management of recovery.
- Evaluate lessons learned for future disaster recovery management and for institutionalisation.

## Risks and challenges

Post-disaster government authorities may be weakened, limiting their capacity and hampering their ability to function or to take on additional recovery challenges. Weak authorities may allow external entities to assume disproportionate authority or influence in decision making and implementation.

Election cycles, fragile coalitions, political instability or tension may all affect the performance of government authorities involved in recovery through turnover of personnel, delays or reversals in decision making.

Housing and settlement recovery implicates several sectoral authorities and levels of authorities. Establishing and maintaining cohesion is critical. Disconnects occur between sectors, between central and local authorities, and between authorities and communities. Reconstruction-specific agencies risk duplicating or side-lining existing authorities vital for capacity and sustainability.

Recovery can present opportunities for politicisation or political interference at policy or implementation levels. Resource levels may generate opportunities for corruption. Management systems may not assure financial accountability.

Expectations may be high and unrealistic regarding resource levels for recovery and regarding the role of the State in meeting recovery needs. In housing and settlement sectors, the State may struggle to manage expectations, or to decide or communicate its role and responsibilities and those of other stakeholder groups. Pressure for visible, tangible outputs and direct construction may mitigate more strategic planning and regulatory activities.

Authorities may not mobilise available resources or partner capacities to contribute to recovery. Stakeholders may pull in different directions undermining policies. Non-government actors (private or assistance) may draw resources from, compete with, or undermine the State.

Event- and area-specific or dedicated reconstruction agencies, systems or programmes are commonly output-oriented and not mandated or concerned with addressing sustainability or durable institutional change such as compliance with standards in the longer term, institutionalisation of learning, or transfer to other areas of the country.

## Factors to consider

Ideally, institutional arrangements and policies for recovery are discussed and planned in advance of disasters, enabling preparatory measures and rapid mobilisation. In reality, even where recovery plans are in place, adaptations will be needed. No governments or partner organisations are completely prepared for catastrophic disasters. All face intensive work to manage disaster response and recovery, including incrementally establishing and building capacity. Whether pre-disaster planning is in place or not, early decisions on institutional arrangements can facilitate early actions and clarity for government, partners and affected populations.

Institutional arrangements are processes of continuous development. Strategies to build capacity are required both at the outset and throughout the recovery, which is also the case for strategies to build partnerships. Roles and relationships develop, as do policies and their implementation. Institutional arrangements are built incrementally, and need to incorporate flexibility to respond to emerging situations.

Harness available capacities and resources from government, the built environment sector and assistance agencies. Work out together how to divide tasks, how to use comparative strengths and advantages. Establish mechanisms to facilitate collaboration and the pooling and allocation of resources. Ensure capacity building strategies incorporate exchange between, and target, different stakeholder groups.

Develop the respective roles, responsibilities and capacities of central and local government authorities, and headquarter and field operations of other non-government stakeholders. Strong central management will not be effective without local implementation capacity, and strong local actors may be undermined by weak central authority.

Linkages between government departments, between central and local authorities, between elected officials and administrative personnel, between government and non-government stakeholders do not develop automatic. Many actors may be working on the same issues in the same locations without working together or communicating. Mechanisms for collaboration need to build across stakeholder groups and levels and are critical components of institutional arrangements for recovery.

# Phases and transitions

Post-disaster institutional arrangements include management of the emergency response and management of recovery and reconstruction, including pre-disaster preparation, post-disaster transitions, exits and institutionalisation.

| Domain phase | Concerned authorities | Activities |
|---|---|---|
| **Pre-disaster** | • Sector authorities<br>• Local authorities<br>• Disaster management authorities | Regulate housing, settlements and risk management:<br>• Develop housing policies<br>• Develop housing and construction standards<br>• Provide or manage public housing<br>• Enforce planning and building regulations<br>• Regulate construction industry (materials, contractors, skills)<br>• Plan preparedness and promote risk reduction policies and measures (may include planning for reconstruction in the event of a disaster) |
| **Emergency Response** | Government and humanitarian emergency response coordination at national and local levels, including:<br>• Prime Minister's office<br>• Civil Protection<br>• Army<br>• Ministries of Finance and Social Welfare<br>• May involve humanitarian coordination mechanisms e.g. IASC Shelter Cluster | Lead and coordinate disaster shelter response:<br>• Assess shelter needs<br>• Develop emergency and temporary shelter strategies at origin and for displaced households and communities<br>• Develop emergency and temporary shelter standards<br>• Develop financial and technical assistance strategies for shelter and early recovery<br>• Mobilise and allocate governmental and non-governmental resources<br>• Manage authorisation of non-governmental actors and activities<br>• Monitor and report shelter situation, including tracking of assistance |

| Domain phase | Concerned authorities | Activities |
|---|---|---|
| **Post-disaster reconstruction and rehabilitation** | Reconstruction coordination through dedicated reconstruction agency, or through existing authorities, including:<br>• Prime Minister's Office<br>• Ministry of Finance and Social Welfare<br>• May involve recovery coordination mechanisms e.g. donor groups, humanitarian agencies, in addition to government coordination | Lead and coordinate housing and settlement disaster recovery:<br>• Assess housing and settlement damages and recovery capacities and needs<br>• Develop housing and settlement recovery policies, as part of social, economic and physical recovery policies<br>• Develop standards for housing reconstruction and repair<br>• Develop land and property strategies to address relocation, needs of various tenure status.<br>• Develop financial and technical assistance strategies for housing reconstruction and repair and for settlement rehabilitation<br>• Communicate and promote safer and sustainable recovery policies and measures<br>• Develop environmental and social safeguards for housing and settlement recovery<br>• Mobilise and allocate government and non-governmental resources including private sector<br>• Manage authorisation of non-governmental actors and activities<br>• Establish systems to monitor and report housing and settlement recovery progress, including tracking of assistance<br>• Plan for exit strategy of dedicated agency and/or institutionalisation of data, systems and learning from recovery experience. |

| Domain phase | Concerned authorities | Activities |
|---|---|---|
| **Post reconstruction** | • Sector authorities (including line ministries)<br>• Local authorities<br>• Disaster management authorities | • Regulate housing, settlements and risk management including learning from recovery experience<br>• Develop housing and housing recovery policies<br>• Develop shelter, housing and construction standards<br>• Provide or manage public housing<br>• Enforce planning and building regulations<br>• Regulate construction industry (materials, contractors, skills)<br>• Institutionalise capacities from the recovery, (including staff, systems, learning)<br>• Institutionalise data from recovery (including standards, guidance, curricula, maps)<br>• Transfer recovery experience within the country<br>• Plan preparedness and promote risk reduction building on experience from the emergency response and from recovery |

Phases, activities and institutional arrangements are commonly conceived as linear or sequential, but they also operate in parallel, or with overlaps or gaps. For example, recovery planning starts while the emergency response continues, line ministries continue while dedicated recovery authorities are in place. Dedicated authorities can facilitate focus and extraordinary measures, but transitions can present competing demands on staff and budgets. Two institutional arrangements may be operational at the same time with overlapping functions and potentially diverging perspectives. Institutional gaps risk an institutional vacuum with consequent delays, confusion, frustration and loss of confidence and resources. Therefore, it is critical that at least interim and working arrangements be in place as early as possible and continuously.

Ideally, institutional arrangements for housing and settlement recovery are discussed, defined and agreed upon during pre-disaster planning for post-disaster response and reconstruction. Pre-disaster planning may be more prevalent in areas experiencing frequently recurring disasters. Ideally, institutional development aims to build on previous efforts and contribute to future systems, policies and programmes. Standing disaster management capacity is usually limited in comparison to the capacities required to deal with a disaster. Institutional leads may rapidly draw upon additional capacity, experience, and expertise through partnerships with other government bodies, institutions, as well as the assistance community.

Establishing government commitment early in the emergency response can build a foundation for, and collaboration between, government entities and both partners and affected communities to incrementally devise agreed-upon policies, programmes and implementation arrangements for recovery.

Early establishment of institutional responsibility will help capitalise on funding opportunities. Funding drives associated institutional arrangements. Funding may be allocated to specific domains of activity, through designated authorities or stakeholders, or may be flexibly structured. Humanitarian funding may be restricted to a short time frame. Recovery funding may be transferred from existing development budgets.

Both emergency response and recovery arrangements are commonly time-bound. The duration of these arrangements needs to be feasible according to the scale of the disaster. Government and non-government stakeholders have to balance recovery activities in the short-term and aspirations to strengthen long-term resilience.

Both governmental and non-governmental actors will face challenges transitioning from emergency response arrangements and activities to longer-term recovery and development, including changes in lead agencies and coordination structures, turnover of personnel, and different processes for decision making.

Effective Institutional arrangements indicate political commitment and inspire confidence among the disaster-affected community, as well as national and international stakeholders. Government ownership is critical to advance key decisions. The absence of government leadership and institutional arrangements is one of the greatest risks in all responses, perhaps posing greater risk than deficiencies in resources or continuing hazards.

# Emergency response

## Emergency shelter

*Girl organising shelter from billboard canvas and firewood from pallets 2 days after the Kashmir earthquake 2005.* **Source:** *GOAL.*

*Dismantling damaged houses and salvaging materials after cyclone Haiyan (Yolanda).* **Source:** *CRS.*

*Emergency tents for families displaced by flooding.*
**Source:** *UN-Habitat.*

## Temporary shelter


*Shelter constructed by household using plastic sheeting and salvaged materials.* **Source:** *Shelter Cluster Haiti.*

*Interior of temporary shelter constructed with support from CRS. Ecuador. Salvaged household items stored in the shelter.*
**Source:** *Eduardo Naranjo/CRS.*

*Red Cross team helps with repairs to roof to make the house habitable after cyclone damage, Vanuatu.* **Source:** *IFRC.*

# Reconstruction and rehabilitation

## Assessing the situation

*Household saves all roof timbers, windows, and doors in preparation for rebuilding.* **Source:** *Robbie Ryan/GOAL.*

*Assessing cracks in building for repair or reconstruction. Indonesia.* **Source:** *UN-Habitat.*

*Senior government structural engineer investigating traditional timber construction details and performance of buildings during preparation of standards for reconstruction.* **Source:** *ERRA.*

## Build capacity and prepare for reconstruction

*Visit to demonstration house and information event to learn safer construction standards and practical application.* **Source:** *Internews.*

*Model house constructed to generate training and information materials. Rising wall and steel reinforcement in confined masonry construction.* **Source:** *UN-Habitat.*

*Expansion of concrete block production capacity to meet increased demand in reconstruction.* **Source:** *UN-Habitat.*

## Support for reconstruction

*Community rehabilitation and upgrading works facilitating housing reconstruction.* **Source:** *GOAL.*

*Retrofitting an external band to make substandard new construction safer. Technical assistance to diagnose and address emerging problems.* **Source:** *UN-Habitat.*

*Technical assistance mobile steel fixer demonstrates steel band corner details at lintel level for household and masons to replicate.* **Source:** *UN-Habitat.*

## Post reconstruction

*Rural houses reconstructed 4 years after Kashmir earthquake. Over 90 percent compliant with safer building standards.* **Source:** *UN-Habitat.*

*Muzaffarabad city recovered 14 years after catastrophic destruction by the Kashmir earthquake in 2005, and with new infrastructure including Noluchi bridge. New construction predominantly compliant with building standards.* **Source:** *Sheikh Ahsan Ahmed.*

*Engineer and social organiser who worked for 5 years in technical assistance for reconstruction after the earthquake, travel to support flood affected communities after massive monsoon flooding in southern provinces and share their experiences of losses and recovery.* **Source:** *UN-Habitat.*

# Institutional arrangement models for recovery

Government institutional arrangements to lead and manage recovery may be broadly categorised as:

- Recovery managed by dedicated government organisation (e.g. reconstruction agency or disaster management authority)
- Recovery managed by existing government line ministries and other authorities
- Hybrids of these two arrangements

Factors affecting the choice of arrangement include the type and scale of disaster, government structures and government capacities. Advantages, disadvantages and implications for the planning and implementation of technical assistance are discussed below.

## Recovery managed by dedicated government organisation e.g. reconstruction agency or disaster management authority

| Advantages | Disadvantages | Implications for technical assistance |
|---|---|---|
| • High-level political support<br>• Clear mandate and focus on disaster recovery and disaster-affected area.<br>• Dedicated mechanisms for mobilising and allocating resources, for procurement and accountability<br>• Dedicated mechanisms for staffing and advisory services.<br>• One window/simplified mechanism for government engagement with assistance agencies, sector stakeholders etc | • More feasible for large scale than for small scale disasters<br>• Costly to establish new premises, facilities<br>• May take time to mobilise capacity<br>• May be focused at national-level with weak field capacity and direct knowledge of recovery situations.<br>• May weaken or struggle to secure cooperation from existing authorities<br>• Overarching recovery organisation may result in centralisation and top down management<br>• High profile recovery organisations may be disproportionately politicised.<br>• Event specific organisations may not be concerned with institutionalisation or sustainability | • Timing of establishment and operational capacity of government organisation may not align with timing of humanitarian programming and allocation of resources.<br>• Dedicated recovery organisation may be empowered to accelerate decision making or take extraordinary measures (revisions of standards, regulatory changes, approval of projects)<br>• Dedicated organisation may provide a focal identity for recovery activities and actors including public information<br>• Dedicated organisation can provide recovery coordination, information management and other systems for government and non-government stakeholders.<br>• Dedicated organisation can integrate across sectors, financial and technical assistance policies, strategies and implementation<br>• New organisational structure may integrate personnel from existing authorities, from assistance agencies and local technical sectors.<br>• Centralised decision making may not accommodate sufficient flexibility or agility for responsive housing support programming. |

## Recovery managed by existing government line ministries and other authorities

| Advantages | Disadvantages | Implications for technical assistance |
|---|---|---|
| • Builds upon existing authorities' experience, policies and programmes<br>• Continuity in personnel and relationships within government and with non-governmental stakeholders<br>• Recovery experience and capacity institutionalised for future disasters and long-term development | • Authorities may have lost capacity due to damages to premises, loss of staff and have to address their own recovery needs.<br>• Authorities have to balance normal and recovery activities<br>• Authorities may be constrained by existing operational procedures for staffing, procurement etc.<br>• Turnover is prevalent in authorities in many contexts, multiple authorities may involve multiple changes in leadership and personnel. | • Existing authorities, locations, roles, responsibilities and services are known to the public.<br>• Existing authorities are involved in pre-disaster risk reduction and post-disaster response and may continue into recovery without delays.<br>• Involvement of multiple authorities may result in complex decision-making processes and fragmented implementation mechanisms.<br>• Separate systems (e.g. information management) or activities (communication) by various authorities may be less than optimal use of resources. |

## Government issues in institutional arrangements for recovery

- National/central and local levels of government[3], and the respective delegation of authority and resources to each level, vary from one country to another. Levels may include national, state, provincial, district, commune, metropolitan or municipal. The potential roles of local government in recovery will depend on the devolution of authority, local capacity, and relationships between local and national levels. Housing and settlement recovery policies, standards and programmes involve decisions at both central and local levels related to regulatory mandates and in order to ensure effective and efficient recovery across all affected areas.
- The establishment of a new authority or a new reconstruction programme requires the prioritisation of a communication strategy. Communication with other government authorities, national institutions, assistance agencies, affected families, the general public, and media involves significant investment. Continued transparent access to information on progress, resources and other aspects of the programme are important for clarity, confidence and credibility. Two-way communication can help dispel misperceptions and ensure the reconstruction agency is aware of local issues and concerns.
- Non-governmental technical assistance stakeholders need to understand governmental structures and dynamics in order to engage in housing recovery policy and implementation issues with the appropriate authority and at the appropriate level (e.g. contributing personnel, discussing standards)

## Non-government organisation issues in institutional arrangements for recovery

- Institutional arrangements and governance refers not only to State authorities, but also encompasses the internal convening, coordination and regulation mechanisms of non-State actors, including assistance agencies, built environment commercial entities, and civil society actors. With a large number of stakeholders and diverse interests involved in housing recovery, the ability and willingness of groups to self-organise may ensure they plan and act more effectively, and streamline their engagement with government.
- Mechanisms to support coordination of housing recovery stakeholders include existing or disaster-specific NGO networks and platforms, the Inter Agency Standing Committee shelter cluster, the UN Office for the Coordination of Humanitarian Affairs, professional bodies, and sector-based networks such as institutes of engineers, construction industry federations, etc.
- Non-government stakeholders may contribute to the development of policies and programmes and to the implementation and reporting of activities, but need to clarify their relationship with government to mitigate the risks of establishing separate, parallel systems. Risks include diverging policies, duplication of reporting, or missed opportunities to strengthen the capacity of national and local authorities. However, in some contexts, convening outside of government may enable stakeholders to provide independent advocacy or to act in a timely manner.
- Emergency actors, including humanitarian agencies, are familiar with rapid and devolved decision-making regarding shelter standards and shelter support strategies. The processes of authorising permanent housing standards and policies are likely to be slower and formalised. Non-governmental actors need to consider the implications of pre-empting or bypassing validation processes. Government authorities need to consider how to establish accelerated decision-making mechanisms.

[3] Definition of 'local government': Local government refers to governing institutions with authority over a subnational area, covering entities including mayor/governor's office, local councils and committees, and local offices of authorities for water, transportation, housing, and environment. Source: UNDP Guidance Note. Restoration of Local Governance Functions. 2016:
www.earlyrecovery.global/sites/default/files/f_sp_restoration-la-functions_web.pdf

# Institutional support to government

Support to government to lead and manage recovery may be provided by either a dedicated recovery agency or existing authorities at the central and/or local levels.

Institutional support measures in the housing and settlement recovery are described in the table below, aiming to meet the following objectives:

- Restore and expand operational capacity.
- Increase and improve human resource capacity.
- Policy, system and programme development.

| Restore and expand operational capacity | | Increase and improve human resource capacity | Policy and programme development |
|---|---|---|---|
| **Financial** | **Logistical** | **Human Resources** | **Activities** |
| Budget support<br>Grant<br>Loan<br>Financial support may be allocated for logistics, human resources and/or programmes | Premises<br>• Rehabilitation of damaged government premises<br>• Provision of temporary premises<br>• Rental of premises<br>• Upgrading of premises<br>• Development of new permanent premises<br><br>Equipment<br>• Provision or rental of vehicles<br>• Provision of communications support (such as phones, internet, cameras, audio visual)<br>• Provision of computer equipment (such as servers, computers, mobile devices)<br>• Rehabilitation, provision or rental of specialised equipment (such as laboratory or mobile material testing equipment) | Modality<br>• Support for existing government staff<br>• Additional government staff<br>• Consultants<br>• Advice or services<br>• Secondments from other organisations<br><br>For the following roles:<br>• Policy, leadership and coordination<br>• Technical including engineering, communications, social protection, grievance redressal, legal, economic, information management<br>• Administrative including financial management<br>• Training and capacity building of personnel | Recovery<br>• Damage, needs, capacity assessments<br>• Recovery policy and programme development<br>• Regulatory and technical guidance for recovery<br>• Rehabilitation or establishment of premises and .equipment.<br>• Resource mobilisation, planning and allocation (including financial and human resources)<br>• Capacity building<br>• Coordination<br>• Stakeholder mobilisation and engagement<br>• Intra governmental, partner and public communications<br>• Information management systems<br>• Fiduciary, social and environmental safeguards |

| Restore and expand operational capacity | | Increase and improve human resource capacity | Policy and programme development |
|---|---|---|---|
| **Financial** | **Logistical** | **Human Resources** | **Activities** |
| | | | • Field implementation including outreach, quality assurance, monitoring, evaluation and reporting<br>• Institutionalisation, transfer and dissemination<br><br>Recovery activities may operate separately or coincide with the normal activities of central and local authorities. |

Expanding operational capacity, increasing or improving human resources, or developing systems, policies and programmes all involve institutional change, but institutional change is a challenging process. Vested interests and inertia in government authorities as well as weak capacity can limit willingness and ability to change or grow. Political or public pressure may generate momentum for change, but may also generate unrealistic expectations. It is sometimes easier to introduce policies and institutional mechanisms where none existed before the disaster compared to revising existing institutions policies and practices, for example, new mechanisms to support rural reconstruction may be more easily developed than strengthening existing mechanisms to support urban reconstruction.

Unprecedented large-scale funding may be allocated to housing recovery. Institutional systems need to be designed and management processes need to be in place to ensure accountability and efficiency in financial management and to safeguard against the risks of corrupt practices. Appropriate financial management mechanisms are required for rehabilitation or construction of premises, procurement of assets, development of systems, recruitment and deployment of staff and for advisory services.

## Stakeholders in housing recovery and technical assistance

Stakeholders in housing recovery and technical assistance have been referred to thus far under the broad categories of government, the built environment sector, assistance agencies and disaster-affected populations. The following section elaborates subgroups (with examples) in each of those categories and their roles in recovery. Identifying and detailing stakeholders and roles illustrates the scope to mobilise extensive resources, to develop diverse activities and to build complementary partnerships. Engaging multiple stakeholders in recovery requires institutional arrangements both to frame coherence and to optimise different capacities, including the potential for the creativity of diverse stakeholders to address a range of issues, to devise innovative solutions and to bring challenging views.

| Agency/entity | Example | Role in housing reconstruction |
|---|---|---|
| | **Government** | |
| **National government** | • Lead and coordinating authorities (e.g. prime minister's office, planning authority, interior, civil protection)<br>• National disaster management authority, Reconstruction agency<br>• Technical/line ministry (e.g. housing, urban development, commerce and industry, education and skills, environment, social welfare, finance, transportation, mining, forestry)<br>• Civil defence forces, army,navy, air force reserve forces, including technical and logistics capacity<br>• Semi-governmental authorities (e.g. utility services)<br>• Elected representatives | • Lead and coordinate government stakeholders, define roles and responsibilities of concerned authorities.<br>• Coordinate and/or carry out emergency rehabilitation of access, infrastructure and services, provision of emergency shelter.<br>• Organise and/or carry out damage and needs assessments.<br>• Mobilise human resources to manage recovery<br>• Mobilise institutional arrangements to manage recovery (including facilities, information management)<br>• Mobilise and account for government and non-governmental funding for recovery.<br>• Establish coordination, define roles and responsibilities of non-governmental stakeholders<br>• Engage with assistance actors, civil society and private sector stakeholders<br>• Define policies for housing recovery including: shelter, housing repair and reconstruction, settlement recovery, relocation, risk management.<br>• Define scope of Build Back Better in recovery to guide all stakeholders.<br>• Define and approve government and non-governmental programmes for financial and technical assistance for housing recovery.<br>• Define and approve regulatory and non-regulatory technical standards, guidance, curricula.<br>• Define and approve communication strategy to support recovery<br>• Coordinate all stakeholder activities in line with recovery policies. |

| Agency/entity | Example | Role in housing reconstruction |
|---|---|---|
| | **Government** | |
| **Local government** | • Provincial, district or municipal authorities<br>• Local department of line ministries<br>• Local department of reconstruction agency<br>• Elected representatives | • Link between national authorities and affected populations, report on local disaster impacts, recovery progress and needs, disseminate policies and guidance.<br>• Establish local institutional arrangements to manage recovery.<br>• Engage with local assistance actors, civil society, private sector stakeholders and with local communities.<br>• Carry out devolved responsibilities for the coordination, management and implementation of recovery activities including regular responsibilities of local authorities:<br>– Local planning including land use, resettlement, risk assessment.<br>– Land use control.<br>– Planning, regulation and implementation of infrastructure and services<br>– Building control including site inspection.<br>– Regulate construction market, operators, material quality.<br>• Coordinate all stakeholder activities in line with recovery policies |
| **International and regional bodies** | • Intergovernmental organisations or coalitions<br>• General political and development coordination or topic specific coordination (e.g. ASEAN Association of Southeast Asian Nations, LAS League of Arab States, CDEMA Caribbean Disaster Emergency Management Agency) | • Support national and local authorities to plan and implement recovery, with policy, strategy and technical advice and expertise.<br>• Facilitate peer exchange of experience and information from other disaster contexts.<br>• Support long-term institutional development of disaster risk management. |

| Agency/entity | Example | Role in housing reconstruction |
|---|---|---|
| | **Built environment sector** | |
| **Construction profession sector institutes/bodies** | • Institutes of engineers, architects, planners, quantity surveyors. National and international bodies.<br>• Trade unions representing professional, skilled and unskilled construction workers.<br>• Construction industry federation | • Support authorities to plan and implement recovery, including research and development of policies, programmes and standards.<br>• Develop human resources and construction sector capacity for recovery and longer-term risk management<br>• Regulate construction sector professionals and businesses.<br>• Advocate for sector issues including with authorities and through engaging in public discourse.<br>• Contribute to institutionalisation of policies, standards, curricula and recovery learning |
| **Construction professionals** | • Individual professionals<br>• Companies (consulting, design/specification, construction, project management, evaluation)<br>• Social enterprises | • Supplement government authorities and non-government organisations capacity to plan and implement recovery, including research and development of policies, programmes and standards, training activities, field support and communication activities, quality assurance and monitoring activities.<br>• Provide specialised technical advice (e.g. risk assessment)<br>• Provide consulting services directly to construction businesses, communities and households, including advice, design and site supervision. |
| **Construction businesses** | • National and local-level representatives of construction sector businesses including:<br>• construction industry federation (material and plant producers and distributors, contractors, service operators.<br>• Mining, quarrying, forestry<br>• Chambers of commerce | • Supply construction materials, tools and equipment.<br>• Develop capacity to meet reconstruction demand<br>• Regulate construction material quality<br>• Monitor construction material prices<br>• Provide information to purchasers through display, advice and events. |
| **Transportation sector** | • National and/or local-level authorities managing transportation and access<br>• Local transport unions or groups in affected area<br>• Storage and warehousing operators | • Store and transport construction materials, tools and equipment.<br>• Transport people to and from affected areas<br>• Increase network capacity to meet reconstruction demand<br>• Provide information to passengers and customer |
| **Utility providers** | • Public, semi public and private sector suppliers of<br>• water, sanitation, waste disposal, electricity, fuel. | • Provide temporary, rehabilitate damaged and develop new infrastructure and utilities.<br>• Develop standards and guidance for household services in reconstruction, including water and sanitation and energy efficiency.<br>• Provide information to households and communities. |

| Agency/entity | Example | Role in housing reconstruction |
|---|---|---|
| | **Built environment sector** | |
| **Education and training sector** | • Vocational training providers<br>• Third-level institutions<br>• Apprenticeship scheme operators<br>• Government and non-governmental education and training providers and programmes | • Support authorities to plan and implement training and capacity building policies, programmes, standards and curricula.<br>• Provide facilities and personnel for training activities.<br>• Provide and/or develop curricula for recovery<br>• Provide training to construction professionals and workers.<br>• Provide training to manage or support recovery e.g. IT, business, communications.<br>• Contribute to institutionalisation of standards, curricula and recovery learning |
| **Financial service providers** | • Remittance<br>• Credit<br>• Insurance<br>• Savings groups | • Facilitate access to cash and credit for reconstruction<br>• Increase service capacity to meet reconstruction demand<br>• Support financial management for reconstruction<br>• Link financial mechanisms to conditions of technical compliance |
| **Communications service providers** | • Internet operators<br>• Mobile phone operators | • Facilitate communications for disaster-affected populations and recovery stakeholders.<br>• Increase network capacity to facilitate recovery<br>• Facilitate money transfers<br>• Facilitate public information through SMS etc |
| **Media** | • Local, national and international media<br>• Press association<br>• Television and radio stations and content producers<br>• Advertising and marketing operators<br>• Newspaper and magazine publishers and reporters<br>• Digital media publishers, web platforms<br>• Social media operators | • Communicate disaster impacts<br>• Facilitate access to information on and analysis of recovery policies, programmes, progress and implications.<br>• Provide platform for discussion, debate and two-way communication<br>• Facilitate public information through broadcast, print and other media.<br>• Contribute to development of communication strategies, channel analysis, content development, impact analysis. |
| **Academic and research** | • Local, national or international:<br>• Universities and educational institutions<br>• Individual academics or researchers<br>• Think tanks<br>• Research organisations or companies | • Contribute to research and development of policies, programmes, standards, M+E of reconstruction progress.<br>• Provide researchers, teachers, students to supplement field technical assistance<br>• Facilitate peer exchange of experience and information from other disaster contexts<br>• Facilitate access to information on and analysis of recovery policies, programmes, progress and implications. |

| Agency/entity | Example | Role in housing reconstruction |
|---|---|---|
| | **Assistance agencies** | |
| **International bodies** | • Disaster risk networks of expertise and communities of practice e.g. ADRRN Asian Disaster Risk Reduction Network | • Support national and local stakeholders to plan and implement recovery, with policy, strategy and technical advice and expertise.<br>• Build capacity of local stakeholders.<br>• Facilitate peer exchange of experience and information from other disaster contexts.<br>• Support long-term institutional development of disaster risk management. |
| **International organisations** | • United Nations coordination and technical agencies<br>• International finance institutions<br>• Red Cross Red Crescent movement<br>• Thematic organisations (e.g. Organisation of World Heritage Cities) | • Provide coordination support for emergency response and transition and recovery as required.<br>• Provide institutional and technical assistance to assess disaster impacts and to plan and implement recovery.<br>• Facilitate peer exchange of experience and information from other disaster contexts.<br>• Provide technical and financial assistance to government authorities and non-governmental stakeholders, according to support organisation mandate and capacity.<br>• Provide assistance directly to households and communities.<br>• Support long-term institutional development of disaster risk management.<br>• Ensure integrity of implementation including social protection measures. |
| **Funding partners** | • International finance institutions<br>• Humanitarian and development funding by donor countries<br>• Philanthropic organisations/ funding: Corporate social responsibility funding | • Provide institutional and technical assistance to assess disaster impacts, to support emergency response and to plan and implement recovery<br>• Facilitate peer exchange of experience and information from other disaster contexts<br>• Provide technical and financial assistance to government authorities and non-governmental stakeholders.<br>• Provide assistance directly to households and communities. Support long-term institutional development of disaster risk management. |
| **INGOs** | • International humanitarian and development organisations non-governmental organisations<br>• Social enterprise organisations<br>• Multi sector or sector specific profiles and programmes (e.g. shelter, rural development)<br>• Headquarters not in the affected country | • Support emergency response and transitional shelter, housing recovery and risk reduction activities.<br>• Contribute to research and development of policies, programmes, standards, M+E of reconstruction progress.<br>• Provide technical and financial assistance to local organisations<br>• Provide technical and financial assistance to communities and households, according to organisation mandates and capacities.<br>• Ensure integrity of implementation including social protection measures. |

| Agency/entity | Example | Role in housing reconstruction |
|---|---|---|
| | **Assistance agencies** | |
| **NGOs** | • National humanitarian and development organisations non- governmental organisations<br>• Social enterprise organisations<br>• Multi sector or sector specific profiles and programmes (e.g. shelter, rural development)<br>• Headquarters in the affected country | • Support emergency response and transitional shelter, housing recovery and risk reduction activities.<br>• Contribute to research and development of policies, programmes, standards, M+E of reconstruction progress.<br>• Provide technical and financial assistance to communities and households, according to organisation mandates and capacities.<br>• Ensure integrity of implementation including social protection measures. |
| **Civil society organisations** | • International and national:<br>• Community organisations<br>• Voluntary organisations<br>• Religious groups<br>• Political groups<br>• Global Network of civil society organisations for Disaster Reduction<br>www.gndr.org | • Support emergency response and transitional shelter, housing recovery and risk reduction activities.<br>• Contribute to research and development of policies, programmes, standards, M+E of reconstruction progress.<br>• Advocate for recovery measures (social, economic, technical, environmental) according to organisation mandates.<br>• Provide technical and financial assistance to communities and households, according to organisation mandates and capacities. |

| Agency/entity | Example | Role in housing reconstruction |
|---|---|---|
| | **Disaster-affected communities** | |
| **Area representatives** | • Representatives of defined geographical areas | • Contribute to research and development of policies, programmes, standards, M+E of reconstruction progress.<br>• Advocate for recovery measures according to area needs and priorities<br>• Link between decision making bodies and disaster-affected populations |
| **Profile representatives** | • Representatives of defined groups (landless, landlords, youth, elderly, women, disabled, gangs, religious groups, ethnic and cultural minorities, displaced, refugees, migrant workers etc) | • Contribute to research and development of policies, programmes, standards, M+E of reconstruction progress.<br>• Advocate for recovery measures according to group needs and priorities<br>• Link between decision making bodies and disaster-affected populations |

*Building material vendors and transporters play vital roles from shelter response through all stages of recovery.* ***Source:*** *UN-Habitat.*

*Experienced civil society organisations provide critical capacity for the large scale social engagement required in recovery.*
***Source:*** *Aga Khan Development Network (AKDN).*

*Women play active roles in planning, budgeting and organising the reconstruction of their homes. Their role in should be incorporated at all levels of institutional arrangements.* ***Source:*** *Vero Wijaya/UN-Habitat Indonesia.*

## Optimising the capacity of multiple stakeholders

Mobilising stakeholders generates capacity, but does not guarantee coherence. Specific measures are needed to build partnerships. Defining institutional arrangements and common terms of reference for stakeholder groups can contribute to establishing clarity and common understanding. Stakeholders engage in recovery with different capacities, backgrounds, mandates and perspectives. Developing consensus and common understanding requires structures for continuous exchange and collaboration. Government and NGOs; NGOs and army; government and media; among other stakeholder group combinations, may not be familiar with each other's ways of working. Effective partnership is not automatic it but requires sustained investment and commitment, which need to be reflected in the design of institutional arrangements.

Shared systems such as common information management and standardized curricula can provide guidance for multiple partners as well as contribute to quality assurance and consistency of services for the affected population. Common systems can facilitate aggregation of data and overall monitoring, provide flexibility for partners to move between different operational areas, and enable interchanges of partners or personnel over the duration of recovery programmes. Recovery activities and stakeholder roles change over time. Flexibility is a key factor in implementation, enabling expansion and contraction, filling gaps, and addressing acute needs according to varying resources and timing in recovery.

Some stakeholders allocate dedicated personnel, resources and full-time activities to recovery. Others may play short-term, part-time, or intermittent advisory roles. Many stakeholders must continue to meet their existing normal mandates: governments have countries to run; academia has students to educate; businesses manage supply and demand; humanitarian agencies may have to balance competing emergencies. Institutional arrangements need to accommodate varying levels of stakeholder participation and variations over time.

Local NGOs, CBOs and private sector actors may be excluded from recovery programmes due to prohibitive criteria for validation or for funding. Local actors would thereby miss opportunities for training and experience through involvement in recovery programmes which could contribute to long-term local capacity to promote risk reduction and sustainable housing and settlements. Mechanisms to promote local actor involvement may include positive discrimination, simplified criteria, support services, or partnerships between larger/external and smaller/local actors.

Incorporating disaster-affected communities as formal stakeholders in institutional arrangements for recovery requires strategies for selection and representation as well as negotiated roles and responsibilities. Participation by communities aims to improve decision making and improve programme responsiveness, build transparency and trust, reinforce ownership, consensus and accountability, and support sustainability and resilience. Community participation may be most likely at the outset or most straightforward at the local level, but institutional arrangements should seek to incorporate community participation at all levels and throughout the recovery cycle. **See Chapter 7: Community-based outreach, mobilisation and engagement** for additional information.

## Case Study
## AXA partner in post-disaster field assessment, Lombok, Indonesia 2018

Following the 2018 Lombok (Indonesia) earthquake sequence, the French Association of Earthquake Engineers (AFPS) decided to organize a one-week field mission. As this event was representative of the earthquake risk in French West Indies, the goals of the mission were: 1) to collect field data related to the earthquake ground motion; 2) to identify building typologies including housing typologies and their performance ; 3) to learn from the post-disaster recovery actions put in place.

*Source: AXA.*

As part of its global strategy to move from payer to partner, AXA supported this mission by providing one team member and the collaboration of AXA Indonesia on insurance related topics. For AXA this was an opportunity to have a better understanding of the role that insurance companies can play in earthquake risk reduction and refine the insurance needs after such a disaster.

Conclusions of this post-seismic mission are made publicly available by the AFPS **(www.afps-seisme.org/PUBLI/Rapports-de-missions/AFPS-Rapport-mission-2018-Lombok-Indonesie)** and aim at bringing new insights for improving compliance with standards and reducing disaster risk.

*New houses reconstructed in accordance with building standards for stone masonry and interpretation of financial assistance conditions that households build individual houses.* **Source:** *Viv Cumming.*

# CHAPTER 3
# National-level technical assistance: developing technical standards and guidance

*Increasing urban density requires planning and construction regulatory measures.* **Source:** *UN-Habitat.*

These guidelines seek to address the challenge and opportunity to plan and implement large scale technical assistance that reaches very large populations and entire areas affected by disasters. While many documents mention technical assistance in terms of mason training and community-level mobilisation, this chapter highlights the significance of national, central or policy-level technical assistance, through exploring the development of technical standards and guidance for housing recovery. Effective national-level mechanisms are vital to achieve increased predictability, consistency and coherence by all technical assistance implementing agencies, and to contribute to reaching a larger scale and securing greater impacts with the resources available. Investing in technical assistance capacity through mass communication or field-level personnel will be sub-optimal if the policy and decision making level is not functioning well.

This chapter describes how national or policy-level operations relate to the international level to district and local-level operations in the context of housing recovery, the scope of technical assistance at national level and the potential for a wider range of stakeholders to engage at national level. The guidelines discuss assessing needs and planning for recovery, frameworks for technical assistance, and establishing central mechanisms to develop technical information (building codes, standards and guidance) as a core requisite for technical assistance activities.

The development of technical standards and guidance illustrate one example of how national-level technical assistance needs to be better understood, better planned and supported. Other topics include governance, coordination, finance, material supply chain, training and capacity building, social and community recovery, communications and outreach, quality assurance, information management, accountability and learning.

## Why does it matter?

Policy and regulatory decisions for housing recovery are critical for the planning and implementation of technical assistance activities. Authorities require confirmation of building codes for certification of construction. Contractors require confirmation of approved technologies and specifications. Organisations need standards as the basis for developing training and public communication activities. Policy and regulatory decisions are most commonly national or central-level decisions.

Housing recovery may be enabled or disabled, delayed or accelerated, due to the timeliness, appropriateness or acceptability of policies or standards for housing recovery. A wide range of decisions need to be taken both as early as possible to guide housing recovery, and continuously, throughout the duration to respond to emerging needs and opportunities. Experience from post-disaster recovery over the last five decades shows that the building codes invariably require expansion and revision in order to meet the needs of housing reconstruction and experience shows that the expansion and revision processes are often problematic and may undermine planning for housing support activities as well as public confidence.

The challenge is to balance technical decisions and information requirements with speed of reconstruction. Reviewing, revising and expanding building codes and technical guidance should be anticipated and appropriate mechanisms established and resourced to undertake the tasks required.

As the housing sector is relatively unfamiliar with regulation, there is potential for confusion, contradiction and speculation regarding building codes and standards, adding to the stress of disaster-affected populations. All housing recovery stakeholders have roles to play in building consensus, coherence and clarity, which cannot be achieved through the existence of building codes alone, but require robust multi-stakeholder systems that support both central level and devolved decision making and implementation.

The challenge of scale is a question of consistency, accuracy and quality in technical assistance. It is equally a question of coverage, equity and optimisation of technical assistance resources. National or central-level multi-stakeholder mechanisms are essential to address these challenges.

*Low strength mud masonry. Difficult to develop standards to achieve resistance to flood or earthquake hazards. Heavy mud masonry buildings perform well on thermal and cost criteria.* **Source:** *UN-Habitat.*

# Strategy for training and capacity development

## Assess damage and losses, capacity and needs:

- Analyse pre-disaster policies, standards and regulatory systems including scope, adequacy, status, effectiveness and compliance.
- Assess pre- and post-disaster population data.
- Assess pre- and post-disaster housing data including numbers, types, condition, and status.
- Profile pre-disaster construction processes, including procurement of materials, labour, finance, engagement with authorities, time, duration, and sequencing of construction.
- Assess pre- and post-disaster construction costs.
- Assess disaster risks and measures to reduce, mitigate and manage risks.
- Assess social and environmental risks and measures to reduce, mitigate and manage risks.
- Assess social structures and social impacts of disasters, including household and community dynamics, that will affect reconstruction.

## Develop technical standards and guidance:

- Housing and settlement profiling
- Construction sector profiling
- Data collection and analysis of policy, program and standard

## Develop a sequenced plan based on actual resources:

### Based on the above assessments develop sequenced plans to:

- Mobilise policy, standards and programme stakeholders.
- Mobilise funding and resources. Carry out resource analysis (sources, conditions, timing) and plan core and discretionary activities accordingly. Establish mechanisms to pool and allocate funding.
- Define institutional leadership and coordination mechanisms.
- Define recovery policies including key government approaches and programmes.
- Define validation mechanisms for policies and standards.
- Review and revise existing and define new regulations, standards and guidance.

- Policy and programme development may require removal of barriers to recovery as well as proactive policies and programmes to support recovery.
- Define validation or approval processes for organisations and projects.
- Direct the allocation of roles and responsibilities, allocation of resources, and the sequence of activities.

### Define technical assistance framework. See below.

### Establish systems for coordination, information management, monitoring and evaluation:

#### Information management systems to support data on and analysis of:

- Information on policies, standards and guidance.
- Recovery progress, repair and reconstruction, rates of completion, rates of compliance.
- Housing typologies and construction technologies.
- Land, rent, material, labour and construction costs.

### Monitoring and evaluation to support:

- Monitor changes in housing typologies and construction practices.
- Analyse factors in non-compliance, types and prevalence of non-compliance.
- Monitor market functioning (land, rent, material, labour and construction costs).
- Analyse factors including availability, quality, regulations, price variations and inflation.
- Monitor access to finance, including financial services, products, income, savings, transfers and credit.
- Analyse factors in financial constraints, including debt levels and levels of investment in reconstruction.
- Evaluate adequacy of standards and guidelines for actual typologies and practices.
- Evaluate adequacy of policies and regulatory measures to address market functioning and affordability of reconstruction.
- Evaluate institutionalisation of policies, standards and regulatory measures.
- Evaluate lessons learned for policy, standards and programme development in future disaster recovery.

*Testing proposed standards to check for issues arising in practical application.*
**Source:** *UN-Habitat.*

## Risks and challenges

If policies, programmes, systems and standards are not developed and communicated in a timely manner to guide housing recovery, households and non-governmental recovery stakeholders will often commence recovery activities nonetheless. Frustration with delays in decision making can erode confidence and rupture working relationships.

Existing regulations may exclude informal, illegal, local, traditional and historic housing typologies, construction materials and techniques. Analysing and validating non-engineered and non-conventional housing and devising appropriate guidance based on scientific verification is desirable although it may involve complex technical and political processes.

In the event of heavy building damages, there are common calls to raise standards in order to avoid future losses. While deficits in compliance are also recognised, authorities and technical experts often seek higher building standards for recovery and are reluctant to authorise local technologies. Standards should ideally be adequate to resist  at least the impact of the recent disaster and assessed risks to

avoid repeated damages and losses. Conservatively high and rigid standards risk being unachievable and unaffordable for many households.

Housing recovery policies, programmes and guidance risk being reduced to engineering or construction criteria. Housing recovery should also take account of its potential role in livelihood, cultural and environmental recovery and development.

Researching standards, preparing curricula and information materials requires a considerable investment of resources. Duplication by several stakeholders working independently represents a considerable waste of valuable time and resources. Agreed distribution of tasks and/or collaboration on tasks will achieve more with the same time and resources.

Policies and technical guidance may be promoted and applied within recovery programmes and areas but not transferred or institutionalised into long-term regulatory systems or into national disaster management, housing and settlement practices. Data may be lost and not retrieved in the event of future disasters.

*Low-strength blocks will affect compliance with standards.* **Source:** *UN-Habitat.*

## Factors to consider

Pre-disaster plans for disaster recovery will affect post-disaster recovery policy development and planning. The adequacy of housing and settlement regulatory systems, including the range of policies and standards, mechanisms for compliance, and human resource capacities will determine the existing level of preparedness to meet housing recovery needs and may constrain the scale and scope of new systems, policies and guidance required. Enhanced regulatory capacity is likely to be required in recovery

The prevalence and quality of pre- and post-disaster data available (population, land use and building stock), and the capacity to manage and analyse data, will affect planning and inform the design and implementation of information management systems in recovery.

The diversity of disaster-affected contexts and conditions may affect the range of policy decisions, guidance and programmes required. For example, a context's unique combination of rural and urban, new and historic, or low and high-income may require different measures.

Complex land, settlement and property issues (e.g. large-scale displacement, hazardous locations or requirements for planning, infrastructure, or resettlement) may constitute preconditions for housing recovery and involve extensive physical, technical, political, social and economic decision making with implications for subsequent housing policies and programmes.

The number and diversity of recovery stakeholders may affect both the capacities available to contribute to policy, guidance, and programme development and determine the coordination measures required to ensure coherence and consistency in technical assistance activities.

# Assessing needs and planning recovery

In the aftermath of disasters, affected countries must make policy decisions, plan programmes and guide significant investment to address recovery needs. Recovery needs are defined, documented and communicated through a range of needs assessments including standardized methodologies such as Post Disaster Needs Assessments (PDNA- developed by the EU, UN, and World Bank), carried out to establish multi-stakeholder consensus on the scale and severity of damages, strategies for recovery (including interim shelter support), and to provide a basis to estimate, mobilise and allocate (financial) support.

The PDNA is a rapid and comprehensive multi-sectoral assessment of an event. It refers to and builds on pre-disaster data and plans and on post-disaster humanitarian assessment data. It projects scenarios for recovery emphasising risk reduction and building resilience. The PDNA also analyses the capacity of the affected population, institutions, and markets to restore damaged infrastructure, housing, livelihoods, services, governance, economic and social systems.

As a key function of the PDNA is to describe disaster impacts, mobilise funding and establish principles to Build Back Better, the published report emphasises accounting for losses (particularly of assets) and estimating needs, more than capacities and resources. The PDNA is necessarily an abbreviated and rapid process. Many other tools have been developed to analyse housing and settlement sector characteristics, capacities, resources and needs, and have the potential to supplement the initial PDNA.

Assessments to inform housing recovery policy, standards and programme development and in relation to monitoring and evaluation of disaster impacts and recovery progress are discussed further in **Chapter 8: Baselines, Monitoring and Evaluations, Accountability, and Quality Assurance.**

**See:**

- Guidance on Post Disaster Needs Assessments: www.gfdrr.org/sites/default/files/2017-09/PDNA-Volume-A.pdf
- Housing sector assessment guidelines: www.gfdrr.org/sites/default/files/2017-09/PDNA%20GUIDELINES%20VOLUME%20B%20-%20Housing.pdf

The PDNA provides an early situation analysis, a basis for addressing urgent priorities as well as a foundation for recovery planning. The Disaster Recovery Framework (DRF) is a tool to assist governments in planning, prioritizing, financing and implementing recovery programs to ensure resilience in recovery and development. A recovery framework could be established as part of pre-disaster planning and tailored following a crisis. Additionally, a recovery framework may be developed after a disaster to facilitate both strategic and operational planning.

**See**:

- Guidance on Post Disaster Recovery Frameworks: www.gfdrr.org/sites/default/files/2017-09/Disaster%20Recovery%20Framework%20Guide.pdf

Guidance for preparing DRFs builds on the PDNA approach and includes methodologies for local as well as national authorities and thematic notes for specific sectors including housing. DRF tools are flexible so countries can adapt to their own contexts. The aim is to ensure greater predictability, clarity, and consensus on institutional arrangements, policies, and programmes to facilitate a smooth recovery process and to improve resilience for the future. A comprehensive DRF may be prepared for all sectors or individual sectors may develop frameworks separately.

Both the DRF and PDNA are structured by sector. Housing and settlements may be defined as a single sector framework, divided into urban and rural strategies, or be combined with community infrastructure, land or other topics. In addition to sector frameworks, cross cutting frameworks articulated in the PDNA and DRF commonly include environment, risk management, gender, inclusion and livelihoods, all of which overlap with housing.

Construction sector recovery (including materials, labour and skills, finance, regulations and quality assurance) may not be reported as a consolidated sector in the PDNA or addressed with a sector framework in the DRF, but it is a major component across several sector frameworks involving extensive construction works (including housing, education, governance and infrastructure).

Housing and settlement recovery commonly involves the greatest number and diversity of stakeholders. A housing and settlement recovery framework enables those stakeholders to plan and implement on an agreed basis, with shared objectives. Experience from disasters over the last two decades indicates that despite commitments in international agreements to improve recovery planning, notable gaps remain.

In housing and settlements recovery, a number of inter-related sub-frameworks require continuous planning and operationalisation by the concerned stakeholders, including institutional, financial and technical assistance frameworks.

- **Institutional framework:** how land, property, planning, housing, risk and disaster management will be governed.
- **Financial framework:** how shelter, reconstruction, repair and upgrading works will be afforded; how support activities will be afforded; and how the economic impact of the disaster will be addressed through housing recovery.
- **Technical framework:** how housing and settlement recovery will ensure greater resilience and technical assistance stakeholders will ensure efficient and effective access to technical advice for affected populations.

Recent initiatives under the Sendai Framework and by the World Bank GFDRR focus on improving institutional and financial frameworks for housing and settlement recovery. Housing recovery continues to be weak in defining technical frameworks including planning for technical assistance, resulting in insufficient funding, delays in decision-making and fragmented coverage.

Technical assistance for housing and settlement recovery needs to address two interrelated domains; settlement recovery and housing recovery. Technical assistance for settlement recovery, which includes land, planning, infrastructure, local governance issues, and stakeholders is receiving greater attention due to increased awareness of settlement factors in climate change risks and urban crises. Technical assistance for housing recovery, on the other hand, receives limited attention, usually from construction professionals and humanitarian agencies, who necessarily tend to focus on gaps such as promoting vernacular technologies or identifying new technologies post-disaster. The result is a limited engagement with mechanisms affecting strategic or large-scale change and, consequently, little long-term impact.

# Developing a technical assistance framework

Building on the disaster recovery framework approach, a technical assistance framework developed by all technical assistance stakeholders and communicated to all recovery stakeholders can ensure technical assistance for housing recovery is better planned, resourced and implemented.
A technical assistance framework may be conceived in terms of a cycle (planning, developing capacity, implementing, assuring quality, and learning) or in terms of a suite of strategies (institutional, financial, research, materials, human resources, communications, information management, monitoring and evaluation).
In both approaches a technical assistance framework addresses time, resources, roles and responsibilities:

## Time:

- Define realistic time frames for housing recovery. Key activities include shelter, construction sector rehabilitation and adaptation, housing repair and reconstruction.
- Define prioritisation, sequencing, timing and duration of associated technical assistance activities, including the establishment of institutional arrangements and systems, decision making, development of human resources, and the deployment of field support operations, completion or transfer strategies.
- Define mechanisms to track and review progress and to revise to time frames.

## Resources:

- Estimate financial and human resources required for technical assistance activities.
- Identify and mobilise financial and human resources for a maximum range and number of sources. Analyse funding terms, conditions and timing. Carry out stakeholder analysis and allocate roles and tasks accordingly.
- Plan core and discretionary technical assistance activities according to the resources available. Establish mechanisms to pool and allocate resources and to analyse value chains.

## Roles and responsibilities:

- Define the respective roles and responsibilities of government and other stakeholders in housing, recovery, and technical assistance. Clarify governmental and non-governmental institutional arrangements related to leading, coordinating, managing, and implementing technical assistance at central and local levels.
- Establish common systems to support all actors and activities (including common curricula and training, shared information management, monitoring and evaluation), ensuring greater efficiency, consistency, and quality assurance.
- Plan strategically to intervene and invest at the appropriate levels, and through the appropriate stakeholder group.
- A technical assistance framework may consider levels (from the international level to the field implementation level), stakeholder groups (government, built environment sector, assistance agencies), or a combination of levels and stakeholder groups.

## Technical assistance framework: levels

| Level | Key role | Technical assistance activities (examples) |
|---|---|---|
| **International** | Exchange | Arrange regional cooperation between governments<br>Facilitate transfer of experience and expertise through events, field visits and deployment of personnel |
| **Central/National** | Regulatory | Develop technical assistance policies<br>Mobilise and coordinate partners and resources<br>Define building standards and material specifications through engineering review process<br>Develop curricula<br>Establish information management system<br>Develop mass communication strategies to promote policies and guidance<br>Legislate for restitution of property, for resettlement or tenure rights<br>Develop and validate financial products<br>Operate grievance redressal systems |
| **Sub national/e.g. District/Municipal** | Coordination | Develop local technical assistance plans and guide their implementation<br>Liaise with central government and with community representatives<br>Coordinate technical assistance implementing partners<br>Establish resource centres<br>Train local partner personnel<br>Manage regulatory compliance: building inspection, contractor certification, vendor licensing<br>Monitor material quality, cost and availability<br>Monitor and report recovery progress and challenges |
| **Local/e.g. Commune, Neighbourhood, Village** | Implementation | Organise community consultation and information events<br>Train masons<br>Construct demonstration houses<br>Carry out building inspections<br>Improve material quality<br>Carry out field assessments to track emerging construction practices<br>Identify recovery challenges including vulnerable groups for supplementary assistance |

## Technical assistance framework: stakeholder groups

| Stakeholder group | Key role in recovery | Technical assistance activities (examples) |
|---|---|---|
| **Government** | Define and enforce policies and standards | Carry out damage and needs assessment.<br>Establish recovery database and information management system<br>Define and communicate policies and regulations<br>Define standards<br>Operate systems of compliance with policies, regulations and standards<br>Manage recovery finance<br>Mobilise and coordinate partners |
| **Built environment sector** | Provide goods and services | Carry out market analysis<br>Expand capacity to produce or distribute materials<br>Improve material quality<br>Increase number and level of skilled construction workers<br>Expand coverage of financial services |
| **Assistance agencies** | Support community recovery activities | Facilitate transfer of experience and expertise from other disaster and recovery contexts<br>Advocate for social protection measures in recovery policies and programmes<br>Establish or expand technical and social support programmes<br>Mobilise and organise communities<br>Identify vulnerable households and groups<br>Promote building improvements |
| **Disaster-affected communities** | Represent the community and demand accountability | Set up community representation<br>Make an inventory of needs |

## Technical assistance framework: combined levels and stakeholder groups (examples)

| | Government | Built environment sector | Assistance agencies |
|---|---|---|---|
| **International** | Regional cooperation | Finance business expansion | Coordinate humanitarian shelter response and recovery |
| **National** | Define policies and standards | Expand building material production capacity and improve quality | Advocate for safeguards in policies and standards |
| **District** | Coordinate partners | Expand distribution networks and transportation | Provide training to local organisations |
| **Local** | Enforce standards | Expand building material vendor locations | Assist vulnerable groups |

## National/central-level technical assistance

A robust national or central level is critical to the success of technical assistance planning and implementation, ensuring timely and appropriate policy and regulatory decisions are taken and institutional structures are established, both of which are necessary to enable all implementation of technical assistance at national, district and local levels. Central or national level includes political leadership and institutional ownership by government, but also represents the decision-making level for professional bodies, the education sector for curricula, construction federations and other key stakeholder groups.

A robust national or central level addresses the review and development of building codes and enforcement mechanisms, validation of public information materials, mobilisation and coordination of partners and resources, among other activities, maintaining an overview to ensure coverage and effectiveness and fostering an iterative relationship with district, local and international-level actors and activities.

The following table describes the scope of technical assistance activities carried out at national and central level across a range of domains.

| Domain | Scope of technical assistance |
|---|---|
| **Governance** | Post-disaster needs assessment, recovery framework, capacity assessments in each of the listed domains<br>Develop institutional arrangements for housing and settlement recovery at central and local levels, including steering, policy, management and implementation |
| | Establish authorisation and validation process for agencies and projects |
| | Restore and expand government operational capacity (premises, equipment, vehicles) |
| | Increase and upskill government human resource capacity (existing and new staff, consultants, advice, services, secondments, training) |
| | Institutionalise systems, capacities and learning developed through recovery. Exchange and disseminate learning from recovery. |
| **Coordination** | Coordinate inter-ministerial and central-local government authorities<br>Transition from emergency response to recovery to long-term development coordination mechanisms |
| | Mobilise and coordinate assistance stakeholders in recovery, including funding, advisory and implementation partners (donors, NGOs, civil society organisations)<br>Mobilise and coordinate sector stakeholders in recovery including construction, finance, media (professional institutes, businesses groups) |
| | Coordinate thematic plans and progress (working groups)<br>Coordinate area-based plans and progress (districts) |
| | Coordinate resource mobilisation and allocation, coverage of assistance and recovery support programme activities |

| Domain | Scope of technical assistance |
|---|---|
| **Finance** | Programme financing, government and non-government funding mobilisation, including for governance and activities under each of the listed domains<br>Financial management system |
| | Develop economic recovery and development strategy under housing and settlement recovery |
| | Financial assistance for recovery, including grants, subsidies, loans<br>Coordinate terms and conditions, operational manuals for implementation,<br>Financial tracking of assistance |
| | Coordinate with financial service sector to support housing recovery including: banking, insurance, cooperatives, credit, savings and loans, remittances. |
| | Coordinate with existing or new social transfer systems or social safety net systems |
| **Supply chain/sector** | Construction sector regulatory and economic development strategy measures to support recovery, including licensing, tax, subsidies, grants, credit, price monitoring or controls |
| | Rehabilitate, expand and improve capacity to extract, produce, fabricate and import construction materials. Business and livelihood strategies, technical improvement strategies, natural resource management strategies |
| | Develop strategies to rehabilitate, expand and improve distribution network capacity and coverage. Access and circulation in the affected area. Transportation, storage, vendors. |
| | Develop quality assurance strategies, including state and sector compliance mechanisms |
| | Monitor market supply, quality, cost, across affected area. |
| **Technical standards and guidance** | Establish technical development and validation mechanisms for recovery including research and development, review and authorisation<br>Mobilise technical advisory expertise |
| | Profile housing and settlements, construction and related sectors.<br>Develop/revise standards, specifications and guidance for:<br>construction materials, construction technologies, building design, repair and retrofitting, hazard resistance, sustainable housing, services and settlements, conservation and heritage, land, property and tenure, natural resource management (more information further down the table). |
| | Develop/revise training curricula and public information associated with the above standards, specifications and guidance |
| | Develop/revise regulatory mechanisms for compliance with and enforcement of the above standards, specifications and guidance. |
| | Devise and implement environmental safeguards for housing and settlement recovery, including assessment and monitoring of environmental impacts, including land use, risk, displacement, natural resource management, water and air quality. |

| Domain | Scope of technical assistance |
|---|---|
| **Training and capacity building** | Develop labour, skills and capacity development strategy<br>Coordinate planning, resources and activities to implement training and skills development strategy<br>Mobilise stakeholders including professional institutes, vocational and other training providers, trade unions, contractor and worker representatives, |
| | Restore/expand and mobilise training operational capacity (premises, equipment, personnel) |
| | Coordinate curricula development, training of trainers, training and skills quality assurance, validation and certification, |
| | Information management, reporting, monitoring and evaluation of training and capacity building activities |
| **Social and community** | Develop social engagement strategy including community-based mobilisation, social and community recovery activities |
| | Develop strategy to address social inclusion, diversity and vulnerability in recovery, including the specific needs of women, youth, elderly, disabled, minorities, tenants, migrants.<br>Link to existing social protection and social protection policies and programmes. |
| | Develop/revise training curricula and public information associated with the above social inclusion and social recovery strategies |
| | Devise and implement social safeguards for recovery, including grievance redressal system, assessment and monitoring of social impact on affected population during housing and settlement recovery |
| **Communication and outreach** | Inter-governmental communication strategy, government-key stakeholder communication strategy on recovery policies and programmes |
| | Mass communication strategy on recovery policies, safer and sustainable housing and settlement recovery, disaster risk management |
| | Field communication strategy on recovery policies, safer and sustainable housing and settlement recovery, disaster risk management |
| | Mobilise stakeholders and resources and coordinate planning and implementation of mass communication and field outreach activities.<br>Restore/expand operational capacity (premises, equipment, personnel, training) |
| | Information management, reporting, monitoring and evaluation of mass communication and field outreach activities |
| **Information management, reporting, monitoring and evaluation, learning** | Develop information management, reporting, monitoring and evaluation strategy, including coordination of government and non-government, domain or project specific data for tracking recovery progress and impacts.<br>Establish common methodologies for data collection, formats for data processing and common baselines. |
| | Restore/expand operational capacity (premises, equipment, personnel, training) |

One of the domains of national/central-level technical assistance is described below in further detail: technical standards and guidance.

# Developing technical standards and guidance

A technical assistance framework needs agreement on, and consistency of technical standards and guidance. Developing technical standards and guidance requires profiles of  housing, settlement and the construction sector and processes to collect and analyse data.

## Housing, settlement and construction sector profiling

Profiling describes and analyses the pre- and post-disaster housing, settlement and construction context as the frame of reference for which policies, regulations and technical information are needed. Profiling provides quantitative data to estimate time, materials and costs, and provides qualitative data, for example, to anticipate stakeholder priorities and challenges. Disasters do not happen in a vacuum. Understanding pre-disaster housing systems is essential to identify building vulnerabilities to be addressed through improvement measures as well as identifying the potential technical assistance channels by which those improvements can be promoted.



**Housing and settlement profile:**

Housing and settlement profiling efforts should focus on the following topics:

- **Household social structures:** population, income groups, income sources, household profiles, nuclear or extended families, inheritance, gender relations, existence of renting-out rooms, and multi-family buildings.
- **Community social structures:** diversity of origins, ethnicities, languages, faiths, livelihoods, construction calendars, attitudes to vulnerable, levels of cohesion and cooperation, and interdependence.
- **Social protection:** minorities, refugees, landless, disabled, participation in social protection programmes including cash transfers.
- **Building:** typology, location and siting, configuration, size, construction technology, condition of services, date, duration, ownership, and occupancy.
- **Housing and settlement policies:** land use regulations, planning, land transactions, infrastructure, housing stock and deficit.
- **Processes of decision making:** choosing a site, planning to build, design, procuring labour and materials, resources, time involved, official versions of the permits and the reality.
- **Usage:** preferences, values, attitudes (e.g. to privacy and security), and practices (e.g. food preparation, sleeping arrangements).

**Construction sector profile:**

- **Materials:** sources of materials, locations, quantities, quality, season, and production capacity.
- **Distribution profile:** actors (e.g. importers, vendors), locations, premises, stock, plant storage, storage, transportation, capacity, size, turnover, staffing.
- **Construction labour:** contractors' origin, plant, skill levels, numbers of engineers, government, private, graduates, site supervisors, sub-engineers, architects, contractors, skilled labour, unskilled labour, plant, formwork, scaffolding, cement mixers, vibrators.
- **Construction education capacity:** vocational and professional training of construction, state, commercial, civil society, locations, capacities, premises, trainers, graduates, curricula, professional bodies.
- **Housing economics:** land prices, construction prices, sources, terms and conditions of housing finance, credit, financial service providers, access and coverage, housing insurance.
- **Quality assurance:** enforcement of standards for materials, labour, building design and construction, planning application and approval processes, industry regulation of standards, professional regulation of service providers, commercial testing facilities.
- **Communication:** mobile phone coverage and operators, internet coverage and operators, mass communication channels (tv radio, newspapers: operators, coverage, audience/subscribers) advertising opportunities, billboards, public and private domain signage.
- **Financial services:** bank account participation, credit and savings group membership, insurance participation rates, access to financial services, terms and conditions involved, mobile phone and internet banking services.

# Data sources, data collection and data analysis

### Data sources to inform profiling, assessments, research and development for policy, programme and standards include the following:

- **Documentation and databases:** census, maps, surveys, photographs, risk analysis, climate projections, published and unpublished government reports, district/municipal reports, building codes, academic and research literature, institutional data, commercial data.
- **Expertise:** Input from architects, engineers, urban planners, social scientists, economists, anthropologists, economists, government officials, academics, professional institutions, commercial bodies, civil society organisations. Input may be written or verbal on specific topics or in response to specific questions, including through consultation for recovery planning.
- **Field data:** Empirical data collected in disaster-affected areas, including documentation of building performance, building damage and defects, physical and social disaster impacts, recovery priorities and challenges, knowledge, attitudes, practices, emergency shelter conditions, labour and material markets, reconstruction practices and progress, through observation, scientific tests, surveys, interviews, focus group discussions and other means. Field data may be collected by dedicated research teams or by actors with field presence. Building inspection data constitutes a key field database.
- **Reference data:** Data sources may include comparable building codes, standards, curricula and public information materials from other jurisdictions, international or previously developed tools such as damage assessment methodologies, documentation of similar housing typologies from non-affected areas of the country.

### Data collection and analysis is a continuous process with different characteristics and activities in each recovery phase:

- **Pre-disaster normal:** The pre-disaster situation may have been documented before or may be accounted for after the disaster.
- **Pre-disaster planning for post-disaster response and recovery:** Pre-disaster planning may include assessments of risks, estimations of disaster impacts, and scenario planning for emergency response and recovery.
- **Disaster impact:** Physical and social impacts documented after a disaster including deaths, injuries, damages, losses, displacement, interruption to services or access, shelter conditions, humanitarian response, and options to meet emergency needs. Protracted or cascading disasters will involve series of assessments. Repeated assessments are also required to monitor unfolding impacts such as disease outbreaks or migration.
- **Post-disaster reconstruction:** Analysis of government, built environment sector, assistance agency, household and community capacities to carry out rehabilitation and reconstruction including improvements to resilience. Documentation of material, financial and human resources available and required, options for expansion

and adaptation. Initial documentation including stakeholder analysis and scenario planning, continuous documentation to monitor progress.

- **Post-disaster reconstruction evolving issues:** Diagnose emerging issues which constitute bottlenecks or revisions to be addressed, opportunities to be seized, regulatory or information needs including new building hybrids, continuing or new defects in materials or building practices, preferences and priorities, impacts of policies, operation of systems, access to services. Documenting evolving issues requires timely, informed and agile collection and analysis, using multiple methods and sources.
- **Continuous refinement and revision:** Prepare initial profiles, assessments and analyses in each phase and establish processes for timely refinement as more detailed data becomes available. Ensure data sources and methodologies are transparent to facilitate revisions.



## Case Study
## Traditional houses in a remote mountainous village of Nepal

*Houses are built of locally-available stone and timber. They are terraced or adjoining, optimising materials and maximising space on a constrained site. The lower floor accommodates animals, fodder, firewood, and other storage. The houses are adapted for extreme climate conditions and for the sociocultural context.* ***Source:*** *Viv Cumming.*

*The original buildings demonstrated some vulnerabilities to earthquakes, but with traditional skills available they were repaired easily and early after the earthquake, supporting the recovery of individual, family and community life, relationships, and activities.* ***Source:*** *Viv Cumming.*

*New houses reconstructed in accordance with building standards for stone masonry and interpretation of financial assistance conditions that households build individual houses. Many of the new houses are single room. The new houses and settlement pattern may result in changes in social structures, livelihood practices, and domestic routines.* ***Source:*** *Viv Cumming.*

*Reconstruction has been a major undertaking, involving all family members in the preparation of the site and of salvaged materials, as well as the transportation of new materials and construction of the building.* ***Source:*** *Viv Cumming.*

## Case Study
## Mechanised construction techniques for safer housing in Haiti

After the 2010 earthquake, the Government of Haiti and key donors invested in two new site developments north of Port-au-Prince in response to pressure to provide housing numbers, and to guarantee cost, control of quality, and compliance with building safety standards.

The construction of both schemes, around 1500 houses in total, used a monolithic reinforced concrete technology approach designed for mass replication, using formwork which shifted for each building and completely different from the prevailing concrete blockwork construction. The mechanised process required only a small number of workers on the site and therefore generated very little local employment or skills development. The technology cannot be feasibly used by typical owners of urban plots in the city and is unlikely to be adopted elsewhere.

Planning of both sites was driven by the construction process, with regimented layouts and no variation in units, but with piped water supply and sanitation, and extensive high-quality site works. The construction type renders the building difficult to extend or adapt in the future. The houses were plastered, painted, and the images used extensively in housing recovery media reports. The unit size and specification in the Haut Daumier scheme is of a much higher standard.

The investment of over 55 million USD was strictly output-focused, and did not make a strategic contribution to recovery outcomes such as the development of standards, skills, or quality assurance measures that would be sustainably applied in future urban housing in Haiti.

- www.uclbp.gouv.ht/pages/41-village-lumane-casimir.php
- www.blog.usaid.gov/2013/10/housing-development-fuels-new-hope-for-haitian-families
- www.usaid.gov/haiti/shelter-and-housing

*Morne a Cabrit new housing development Haiti.*
**Source:** *UN-Habitat.*

*Haut Daumier new housing development Haiti.*
**Source:** *UN-Habitat.*

# Building codes, regulations, standards and guidance for housing recovery

In many contexts a large proportion of housing lies outside of planning control, building regulations and standards. The challenge to improve housing is not only a technical issue but also has political, legal and social implications for post-disaster reconstruction and for technical assistance. Government authorities, the built environment sector, assistance agencies, and affected communities need to understand the objectives of different status and types of technical information, the mechanisms by which technical information is developed and validated, and the scope of technical information required for housing recovery, in order to contribute effectively to the process.

## The status of building regulations and building advisory guidance:

- **Regulatory:** Building regulations include formally validated building codes and standards. Compliance with regulations is required under law and subject to enforcement by authorities. Codes and standards may include structural, spatial, service and/or performance requirements and apply to construction and components. Codes and standards are commonly subject to peer review and may refer to equivalent international codes and standards. The main purpose of building regulations is to protect life, public health, safety and welfare as they relate to the construction and occupancy of buildings.
- **Advisory:** Advisory technical information includes non-regulatory building standards and guidance not subject to compliance. Guidance does not usually include structural requirements, but may include spatial, service or performance criteria. Advisory guidance may be developed by a range of organisations and may not be formally validated. Adoption of guidance is normally on a voluntary basis. Advisory information may illustrate non-binding options such as generic designs and plans. The purpose of building guidance or advice covers a range of objectives (e.g. conserving architectural heritage, improving energy efficiency, and cost effectiveness).

Funding for post-disaster housing reconstruction, repair or upgrading work may be contingent on compliance with regulatory standards or adoption of advisory guidance, according to the financial terms and conditions issued by government authorities, commercial financing bodies, or assistance agencies.

The status of standards for emergency and temporary shelter is likely to be advisory, while the status of standards for permanent housing is likely to be regulatory.

Regulatory systems continuously evolve. Technical guidance, which is initially advisory, may later be formalized into regulatory standards, for example in instances related to thermal performance standards, provisions for disabled access or rainwater management measures. Similarly, risk reduction measures should be formalized in building regulations following disaster events.

## Building codes, housing standards, house designs, specifications:

- After a disaster, housing recovery stakeholders (authorities, built environment actors, assistance agencies) seek to revise or devise and communicate technical information for housing reconstruction. Confusion commonly arises when house designs are interpreted as building codes and considered obligatory or regulatory on topics such as room or building layout and size. Understanding the significance of the status of different types of information, their objectives, development, validation and application may mitigate the risks of such confusion.
- Building codes are based on engineering calculations to ensure structural safety
- Housing standards include socio-economic norms (space standards are not engineering)
- House designs can illustrate codes and standards but may limit options and preferences
- Specifications can clarify information on materials, components or workmanship to meet codes and standards

## Mechanisms for developing building regulations and technical information:

Technical assistance activities including damage assessments, building inspection, training curricula, mass communication campaigns, and demonstration buildings all require confirmation of the content and status of standards and guidance to ensure accuracy and consistency in the dissemination of information and to ensure recovery stakeholders can make informed decisions.

Mechanisms need to be established at central/national level need to manage technical decision-making processes including the following:

- Confirm approval process for technical information by existing authorities, by dedicated recovery agencies or by appointed bodies.
- Confirm damage assessment methodology and analyse findings.
- Mobilise technical capacity to review and revise existing technical information, to identify gaps and priorities and to develop new technical information (e.g. respective authorities, engineering professional bodies, academia, construction sector).
- Confirm approval process for technical assistance products and activities (e.g. posters, curricula).
- Establish regular monitoring and evaluation processes including to track reconstruction progress and to identify emerging needs for technical information.
- Organise field testing and piloting of proposed standards and guidance, including repair and retrofit options as part

of drafting and review process.

- Mobilise and allocate resources for the above activities.
- Organise independent review of recovery progress and quality, including compliance with standards.
- Confirm process for institutionalisation of technical information generated through recovery (e.g. into regulatory frameworks, national curricula).

## Scope of building regulations and technical information:

- **Existing:** Review and revise existing codes, standards and guidance, including analysis of building performance and damage and analysis of risk.
- **Additional:** Develop additional technical information required for housing recovery. The following topics are likely to fall outside of existing regulations:
  - Traditional and local construction techniques and materials
  - Low income informal housing and settlements
  - Historic housing typologies and construction
  - Conservation of historic housing
  - Repair
  - Retrofitting
  - Extensions to existing buildings
  - Temporary shelter structures
  - Temporary settlements (including camps)
  - New technologies for construction
  - New technologies for repair or retrofitting
  - Rapid build technologies
  - Innovative use of known materials
- **Materials, techniques and services:** Review or develop technical information for specifications, quality assurance and guidance. Technical information may be sourced from concerned authorities or sector stakeholders (e.g. mining, industry, public health) and reviewed for application in housing recovery.
  - Materials and components (e.g. imported, extracted, manufactured, fabricated)
  - Techniques (e.g. siteworks, concreting)
  - Services (e.g. household water supply and storage, sanitation arrangements, sewerage treatment and disposal, environmentally sustainable construction and services, ventilation, insulation, energy efficient heating and cooking, fire safety)
- **Regulatory frameworks:** damage assessment, habitability assessment, damage and vulnerability assessment, building permit process, site inspection process, including stage and completion certification of construction.
- **Curricula:** According to scope of technical information above. See Chapter 5: Training and Capacity Development for further reading.
- **Certification:** Registration and certification of building inspectors, material producers and fabricators, professionals (engineers, architects, surveyors), contractors, labour, service installers and providers, trainers and technical assistance programme personnel, which is conducted through government, professional bodies, academia, assistance agencies.

## Criteria for building regulations and technical information for housing recovery:

- **Achievable:** minimizing the vulnerability by enhancing the safety measures while taking into account the currently and potentially available materials and technologies, construction sector characteristics and skills and taking account of settlement factors including site constraints. Technical information will be required for a range of contexts.
- **Affordable:** based on the economic situation of households and the characteristics of the housing market, taking account of access to and costs of land, material, transport and labour across various locations and for a range of typologies. Technical information will be needed for a range of income groups and housing budgets.
- **Note:** The potential for standards to be achievable and/or affordable may be changed by the availability of technical assistance or incentives such as financial assistance.
- **Acceptable:** based on household structures, lifestyles, social and cultural values, priorities and preferences, tenure status, and the specific needs of women, children, elderly.
- **Risk informed:** based on analysis of risks including building related hazards, natural hazards, climate change and the health, safety and security of housing occupants.
- **Settlement informed:** based on analysis of inter-relationships between individuals and communities, between buildings and infrastructure, private and public domains, urbanization.
- **Sustainable:** taking account of housing environmental performance, utility and maintenance costs, environmental impact and natural resource management.

## The process of developing, validating and applying technical information needs to be:

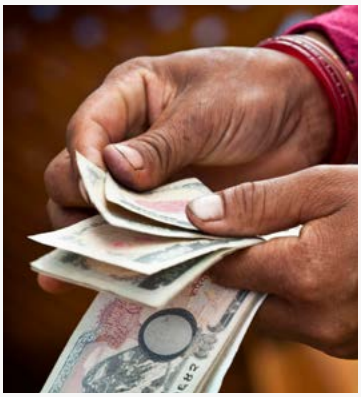
- **Responsive:** Respond to locally diverse situations and changes occurring during recovery, including new technological opportunities and new preferences emerging from households' choices. Review the interpretation of standards as applied. Provide mechanisms for expansion of technical options and review the interpretation of standards and adoption of guidance.
- **Incremental:** The range of information to be developed is extensive. It is unlikely that all standards can be decided at the outset of recovery. An incremental process needs to be planned according to priorities, with key principles established as early as possible. Allocate parallel and sequenced research and development tasks among technical stakeholders. Guidance for the

most prevalent building technologies may be addressed before specialised solutions for small numbers of unique buildings. Manage and communicate the process of expanding options to mitigate the risk of confusion and contradictions.

- **Target a wide audience:** Technical information after disasters commonly focuses on compliant new construction. However, many households require advice for repairs or retrofitting of damaged or vulnerable existing buildings or constructing extensions. The mechanisms to develop and promote technical assistance in recovery represent an unprecedented opportunity to make information available to the entire community; not only those rebuilding or repairing in the short term, but also those planning to build in future, and those with existing buildings who are interested to improve their building performance or services.
- **Drawn upon wide sources:** Technical information commonly focuses on the recent disaster event. Guidance should be based on analysing the risks of multiple hazards and optimise opportunities to provide information on topics ranging from material quality to energy efficiency, from conservation of heritage to innovative sanitation. Given this diversity, the development of housing information may involve multiple sectors (e.g. infrastructure, environment) and multiple contributors (e.g. mechanical engineers, economists), with implications for decision making mechanisms and the planning and staffing of technical assistance activities.

*Financial assistance in Nepal.* **Source:** *CRS.*

# CHAPTER 4
# Financial assistance in relation to technical assistance



*Source: IFRC.*

This chapter aims to increase understanding of financial assistance for housing recovery and the implications for technical assistance. It focuses only on households and communities. It does not explore funding for governments to finance institutional arrangements, to manage housing recovery, or to invest in infrastructure measures; nor does it discuss funding for the built environment sector (producers, vendors, education providers) for rehabilitation or capacity expansion, both of which may mitigate housing reconstruction costs. Furthermore, this chapter does not discuss the funding of technical assistance activities by government, built environment sector actors or humanitarian agencies (for further reading see Chapter 11: Financing technical assistance for housing recovery).

Financial assistance for households and communities refers to material or financial resources provided to disaster-affected households and communities to support their housing recovery including shelter, housing repair and reconstruction. Financial assistance is a transfer or grant from a donor to a recipient household or community and may take various forms including cash, tax relief, materials or full houses. As well as financial assistance, we discuss financial services or mechanisms for households to access and manage their own funds including through credit. Insurance is a financial service based on a mutualised system, but in the case of disasters, insurance payments may embody characteristics of financial assistance or transfers from the perspective of the receiving household.

Financial assistance, financial services and insurance all play key and inter-related roles in housing recovery.

This chapter describes the following:

- **The purpose of financial assistance:** emergency, temporary and interim shelter, repair or damaged buildings, retrofitting of substandard buildings, reconstruction, and resettlement.
- **Amount of financial assistance and eligibility:** defining the amount of financial assistance and eligibility for financial assistance for households.
- **Forms of financial assistance:** grants/cash transfers, loans/credit, in-kind assistance, community contracting, subsidies, and measures to promote financial inclusions.
- **Insurance:** the role of housing insurance and microinsurance in housing recovery and the implications for technical assistance

# Why does it matter?

Lack of access to finance after a disaster is a significant obstacle to recovery, slowing down reconstruction or prompting people to compromise on quality, including compliance with standards. Financial assistance for housing recovery can enable households to accelerate and improve the quality of shelter, housing repairs or reconstruction and offset costs. Financial assistance can also have negative impacts, including inflation and destruction of damaged buildings.

Very large-scale funding has been provided to support shelter and housing reconstruction after disasters through both cash grant programmes and insurance payments. Growth in digital technologies, financial services, and social transfer programmes suggests that financial assistance directly to households will increase. The planning and implementation of financial assistance programmes usually focus on accelerating reconstruction, but pay less regard to whether or how financial assistance leverages improved reconstruction. This deficiency is reflected in the absence of appropriate and dedicated funding and planning for associated technical assistance strategies to safeguard or optimise the considerable investment in financial assistance. Reasons for this deficiency include differences in terms of backgrounds, expertise and operating systems between financial and technical assistance stakeholders, contributing to weak levels of collaboration between financial and technical assistance planning and implementation.

Although extensive funding has been, and will continue to be provided to households through financial assistance for housing recovery, the greater proportion of resources is mobilized by households and communities themselves. Financial assistance and technical assistance both represent strategic contributions to add value to those private resources and efforts.

*Source: IFRC.*

*Source: CRS.*

# Strategy for financial assistance

## Assess damage and losses, capacity and needs:

### Financial services:

- Assess pre- and post-disaster financial service operators, capacity, coverage, logistics, products and participants.
- Assess post-disaster capacity/disaster impacts on government functionality: including premises, personnel and data, and requirements for restoration of financial service. functionality or for temporary services.
- Prevalence of bank accounts, terms and conditions for participation in banking.
- Levels of savings, debts, assets, incomes, remittances.
- Insurance coverage, participation in insurance, levels of coverage, levels of and expected process for payments.

### Financial assistance:

- Assess government funding for recovery, levels, terms and conditions.
- Assess non-government funding for recovery, levels, terms and conditions.
- Assess pre- and post-disaster social transfer systems, operation, transaction costs, coverage, levels, eligibility, terms and conditions.

## Develop a sequenced plan based on actual resources:

### Based on the above assessments develop sequenced plans to:

- Mobilise financial assistance and financial services stakeholders and resources.

- Define institutional leadership and coordination mechanisms for financial assistance.
- Define financial assistance strategies to include scope, levels, eligibility, terms and conditions:
  - financial assistance strategy for emergency and temporary shelter and emergency rehabilitation works
  - financial assistance strategy for housing reconstruction and repair, land and resettlement, settlement/community rehabilitation and development and risk reduction
  - financial assistance strategy for housing sector recovery and development
  - financial assistance strategy for specific subgroups including rental housing, multi-family buildings, informal settlements, historic and new areas
  - financial assistance strategy to supplement assistance for extremely vulnerable households and communities
  - financial assistance strategy for associated sector recovery and development including: livelihoods, health, environment and residential services.
- Define financial disbursement, reporting and accountability mechanisms.
- Define strategies to develop financial services sector to support housing and settlement recovery and development, including development of financial products and services.
- Restore financial service capacity and expand capacity including temporary capacity to support recovery.
- Increase participation in financial services including banking, savings and credit schemes, and insurance.
- Train financial service providers to support recovery. Train government and non-government recovery stakeholders on financial assistance and financial services in housing and settlement recovery.
- Promote financial literacy and inclusion to support housing recovery through targeted household, community and public information and engagement initiatives.

## Establish systems for coordination, information management, monitoring and evaluation.

### Information management systems to support data on and analysis of:

- Information on financial assistance policies and programmes, financial assistance available, eligibility criteria, terms and conditions
- Information on financial services and products available, including credit, insurance, and savings groups
- Financial assistance allocation and disbursement (through all assistance disbursement mechanisms)
- Financial service providers
- Insurance participation, levels and disbursement
- Credit, including savings and loan groups, formal and informal debt

### Monitoring and evaluation to support:

- Monitor access to financial services (including participation in banking).
- Monitor financial disbursement in relation to reconstruction progress (rate and compliance).
- Monitor use of financial assistance.
- Monitor coverage of social safety net systems.
- Monitor economic recovery at macro and micro levels.
- Monitor reconstruction costs throughout the affected areas.

- Monitor housing economic vulnerability, including no progress or poor progress in reconstruction by households, groups or communities and analyse contributing factors.
- Evaluate efficiency and effectiveness of social safety net systems.
- Evaluate impact on longer-term participation in banking and insurance.
- Evaluate adequacy of financial services to meet reconstruction needs, including adequacy of products, regulatory and other factors.
- Evaluate institutionalisation of financial service and financial assistance measures.
- Evaluate lessons learned for the use of financial services in future disaster recovery.

# Risks and challenges



## Funding

Insufficient or slow mobilisation of resources, including funding for recovery, will result in slow, or in some cases no, housing reconstruction or repair. Additionally, such insufficiencies can result in the reinstatement or exacerbation of vulnerabilities to hazards, displacement, disruption of lives and livelihoods, depletion of personal savings and assets, and the erosion of development gains.

Political and institutional uncertainty or delays can jeopardise the securing of funding for recovery programmes. Without clear and adequate planning, both government and assistance funds are likely to be allocated in an ad hoc manner, resulting in policy divergence, insufficient support for key programmes, inequitable distribution of funds, and inefficient programming. Failure to harness and guide funds may have political repercussions.

High profile and catastrophic disasters mobilise significant humanitarian funding and personnel, but resources may be disproportionately distributed between relief and reconstruction activities, without flexibility for reallocation or prioritisation. Delays in planning and progressing reconstruction plans and activities may result in increased costs incurred in shelter.

Funding agencies (government, banks, humanitarian organisations) may be reluctant to invest in support for private housing reconstruction and repair, compared to public works such as infrastructure, schools or health services. Funding agencies may be risk averse where property status is complex or informal, or where construction is outside of international or national codes (including historic and traditional technologies), due to concerns over liability for safety and financial accountability.

Large amounts of funding may be allocated to housing recovery programmes, by both government and assistance agencies. The risk of corruption or misuse of funds is a priority concern, requiring robust financial management systems.

## Financial assistance

Financial assistance for housing repair and reconstruction usually constitutes a contribution rather than meeting the overall cost. Recovery is contingent on households mobilising the balance of the cost, often a larger proportion than is delivered through financial assistance mechanisms. Construction costs may be significantly higher where access is limited and transportation adds to expense.

Unconditional financial assistance may accelerate reconstruction activity but may not incentivise compliance with standards or improve building safety.

While conditional financial support can leverage compliance with standards, the specifications may be too high, deadlines too short, or other terms and conditions too restrictive for households. Risks include the demolition of reparable buildings in order to access grants for reconstruction, exclusion of historic buildings and local technologies, rejection of assistance by communities, or construction of token small houses to access grants followed by substandard construction later.

Injections of financial assistance into the recovery economy may contribute to inflation in costs for materials, transport and labour. Market assessments and monitoring can track impacts, including market absorption capacity. Managing the timing and quantities disbursed can mitigate inflationary risks. Expanding market capacity and supply can also mitigate inflation which may occur in any case due to increased demand.

Broad-based cash programmes with equal levels of assistance for all households (or categories of damage), assume equal capacity by all households to carry out construction work. However, vulnerable households may struggle to commence or complete construction or to meet standards. Supplementary assistance may be needed to redress disadvantages experienced by some households or communities. Grievance redressal mechanisms are needed to mitigate the risk of exclusion from assistance.

Limited access to financial services poses a major challenge to recovery programming particularly in remote areas and for those excluded from formal services. Increasing access requires early and rapid regulatory measures as well as investment in service infrastructure in order to be fit for purpose in time for financial disbursement.



# Factors to consider

## The amount, timing and terms of funding available:

**Household and community resources:** The economic situation of disaster-affected households and communities before and after the disaster including livelihood impacts and recovery, diversified sources of savings and incomes, access to credit, insurance coverage, and size and timing of insurance payments. Remittance payments are likely to increase if a clear plan is articulated for reconstruction

**Government resources:** The scale of total damages and losses across all sectors in absolute terms, and in relative terms, will affect capacity for recovery. Relative terms include the proportion of damages within the affected area, and the proportion of the national area, population and GDP. The national economic situation, including budget surplus or deficits, and existing levels of debt affect recovery.

**Humanitarian resources:** Overall levels of humanitarian assistance including international and national, institutional and philanthropic, financial and material resources, and the terms and conditions attached. Resources may be allocated to emergency response or recovery or prioritised by location, sector or other criteria.

## The cost of shelter and reconstruction:

The types of buildings to be replaced or repaired post-disaster represent a considerable variable in recovery with implications for costs and time requirements. For example, urban multi-story conventional construction will cost more than single-story, lightweight, local construction, although each may constitute an economic challenge for the respective households.

Resources consumed in meeting emergency and temporary shelter needs deplete the overall resources available for housing recovery, or increase the total cost of housing recovery. Factors in shelter costs include climate conditions, rental costs and the duration of displacement.

Inflation in land and construction markets may affect costs over the duration of recovery.

## Access to financial services:

Financial services play a key role in recovery. Factors include participation in banking systems, access to financial services, insurance coverage and types and of products available, savings, credit and financial products available, eligibility, and terms and conditions. Access to finance is a determining factor for sector actors such as material producers or vendors as well as for households undertaking reconstruction.

Existing social safety net systems or previous experience in cash programming by government authorities and assistance partners may provide systems to be used or modified for recovery assistance. National identity and other personal data systems can facilitate financial services and financial information management.

## Balancing funding for households and for housing system recovery:

Financial assistance to the housing demand side (households) needs to be balanced with financial investment in the housing supply side (material producers, distribution networks)–or enabling environment–to facilitate expansion and improvement of the construction sector and to mitigate inflation. Financial assistance to households needs to be balanced with investment in settlement rehabilitation and development including planning, infrastructure and risk mitigation.

Financial assistance for reconstruction and repair needs to be accompanied by appropriate levels of technical assistance and by appropriate environmental, social and financial safeguards to optimise investment. Accompaniment measures require dedicated funding and mobilisation of capacity from the outset.

## Managing financial assistance:

The robustness of institutional financial management arrangements, pre- and post-disaster, will affect the government's capacity to mobilise, plan, disburse and account for funds.

Clarifying institutional arrangements, policies and programmes for recovery early may generate confidence, secure funding, and inform decision making by sector and assistance stakeholders and by affected communities and households. Confirming and communicating details of financial assistance as early as possible (including eligibility, terms and conditions) may further reassure and guide stakeholders.

Establishing systems for the financial tracking and management of resource allocation and disbursement may inform decision making, ensure efficiency and minimise risks of discretion and corruption. Regular reports to all stakeholders and to the wider public on status and progress may promote accountability and transparency.

# Purpose of financial assistance and associated technical assistance

The key aims in providing financial assistance to households after a disaster to meet their housing needs are:

- To accelerate the rate of sheltering or rehousing, reducing the time, cost and impacts of disruption.
- To leverage shelter and housing quality through increasing the resources available and through conditioning compliance with terms including building standards.

Financial assistance strategies or initiatives may be also conceived to meet a range of other objectives including:

- Monetising communities and regenerating local markets, assuring choice and dignity for affected populations, or building political support or good will.

The purpose, aim or objective of financial assistance is described in summary below by outcome according to phase with associated implications for technical assistance.

## Emergency/temporary/interim shelter

Households whose homes are destroyed, damaged, inaccessible or otherwise not habitable due to the impacts of disaster are provided with assistance to meet emergency shelter needs and/or to organise temporary shelter until they can reconstruct their homes or organise permanent housing. Financial assistance enables households to purchase in local markets and prioritise according to their needs:

| Purpose of financial assistance | Technical assistance |
|---|---|
| Replacement of basic personal and household assets, e.g. clothing, bedding, cooking utensils | |
| Enable access to materials/labour to construct temporary shelter (e.g. tarpaulins, poles, bamboo, rope, CGI sheets and for temporary service provision) | Guidance for construction of temporary shelter including use of temporary materials, weatherproofing, safety and hazard resistance of shelters<br>Guidance for temporary service provision |
| Enable access to materials/labour to secure, weatherproof or rehabilitate damaged buildings for habitation (e.g. plastic sheeting, tools, carpentry, repairs to water supply) | Guidance for temporary works to damaged buildings and services |
| Contribute to rental costs (e.g. accommodation, land, or utilities) or to hosted arrangements | Guidance on tenure rights in relation to rented and hosted temporary accommodation<br>Guidance on habitability criteria including disaster resistance, fire safety, services and security |
| Quality assurance for the above | Monitoring of material quality and costs<br>Monitoring and evaluation of shelter outcomes<br>Rental accommodation may be subject to inspection |

## Repair of damaged buildings

Households whose homes are damaged are provided with assistance to carry out repairs and/or replace damaged household goods including:

| Purpose of financial assistance | Technical assistance |
|---|---|
| **Replacement of personal and household assets:** clothing, bedding, furniture, electronic goods | |
| **Cleaning and debris management:** removal of flood deposited material, removal of fallen building materials, salvage of building materials for reuse | Guidance on cleaning, safe demolition and debris management |
| **Stabilisation measures and weatherproofing to prevent further damage:** tarpaulins, temporary roofing, propping of walls | Guidance on building structure diagnosis, stabilisation and weatherproofing works |
| **Minor repairs:** Repair of broken windows, doors, minor cracks, plaster and other finishes, rehabilitation of water, electrical services and fittings | Guidance on minor repair works |
| **Major repairs:** Repair or replacement of structural elements, extensive works. | Guidance on building structure diagnosis and major repair works |
| **Retrofitting:** Improvements to increase hazard resistance may be carried out along with repair of damaged buildings, such as additional bracing, anchorage of frames, and jacketing of columns or beams | Guidance on building structure diagnosis and retrofitting works |
| Quality assurance for the above | Major repairs and retrofitting may be subject to inspection |

- Financial assistance for repairs is usually determined considering feasibility in relation to replacement cost of the building.
- Categorisation of minor/major damage or destruction for financial assistance purposes depends on factors including building types, disaster risk, disaster impacts and the resources available.

## Retrofitting of substandard buildings

Households whose homes are not directly damaged by a disaster but assessed as highly vulnerable are provided with assistance to carry out retrofitting works:

| Purpose of financial assistance | Technical assistance |
|---|---|
| Diagnosis of appropriateness of retrofitting | Structural diagnosis of buildings and cost-benefit analysis of retrofitting |
| Retrofitting: Improvements to increase hazard resistance such as additional bracing, anchorage of frames, jacketing of columns or beams | Guidance on retrofitting works |
| Quality assurance for the above | Retrofitting may be subject to inspection |

- Financial assistance for retrofitting is usually determined considering feasibility in relation to replacement cost of the building.

## Reconstruction

Households whose homes are destroyed or damaged beyond feasible repair are provided with assistance for reconstruction. Households whose homes are vulnerable beyond feasible retrofit or sited in locations declared as uninhabitable may also be provided with assistance for reconstruction.

| Purpose of financial assistance | Technical assistance |
|---|---|
| Construction of new house in accordance with terms and conditions including building regulations, minimum building size<br><br>Construction of new house in accordance with optional improvement measures (e.g. environmentally sustainable services) | Guidance on new construction and services |
| Quality assurance for the above | New construction may be subject to inspection for compliance with building regulations and terms and conditions of financial assistance.<br><br>Adoption of non-regulatory or optional improvement measures may be monitored |

## Site works

Households and communities whose homes and/or settlements are destroyed, damaged, or vulnerable to hazards are provided with assistance for siteworks including:

| Purpose of financial assistance | Technical assistance |
|---|---|
| Rehabilitation or upgrading of residential infrastructure and services: water supply, water storage, sanitation, sewerage disposal, drainage, electricity supply, retaining walls, access and circulation pathways and steps | Guidance on infrastructure and service development or rehabilitation including diagnosis of existing networks. Specifications for works |
| Development and implementation of measures to mitigate site related risks: drainage, stormwater management, flood mitigation works, retaining walls and slope stabilisation works | Guidance on risk mitigation site works<br><br>Specifications for works |
| Quality assurance for the above | Siteworks may be subject to monitoring for adherence to guidance and specifications |

## Resettlement

Households whose homes and lands have been destroyed or lost due to disaster or whose homes and lands are declared as uninhabitable are provided with assistance to relocate to new sites including:

| Purpose of financial assistance | Technical assistance |
|---|---|
| Acquisition of single or grouped sites for reconstruction | Guidance on site assessment<br>Guidance on land transactions |
| Infrastructure and site works for residential development including access, water and sanitation, electricity supply | Guidance on infrastructure and service development |
| Quality assurance for the above | Relocation sites may be subject to inspection<br>Infrastructure and siteworks may be subject to inspection |

**Note on timing and sequencing:**

- Housing repairs often start immediately after disasters. Making damaged buildings habitable can reduce displacement and the need for temporary shelter. Households may not wish to start repairs until damage has been assessed. Damage assessments should ideally be carried out as early as possible.
- A site for reconstruction is a prerequisite for housing reconstruction. Land acquisition and resettlement processes will need to be completed before reconstruction.
- Siteworks including infrastructure rehabilitation or development may be implemented before, during or after housing reconstruction. Factors include the need for site access or water supply for construction work, and technical or participatory planning processes to develop risk mitigation or other community works.

Financial assistance strategies or initiatives may be also conceived to meet a range of other objectives including: monetising communities and regenerating local markets, assuring choice and dignity for affected populations, or building political support or good will. The objective of financial assistance is described in summary below by outcome according to phase with associated implications for technical assistance.

*Ravine in informal neighbourhood of Campeche, Port au Prince, Haiti after the 2010 earthquake, before improvement measures.* **Source:** *UCL.*

*Ravine in informal neighbourhood of Campeche after investment in improvement measures to improve circulation and drainage, and to reduce solid waste disposal and flooding risk. Upgrading infrastructure in residential neighbourhoods supported housing and settlement recovery.* **Source:** *UCL.*

*Construction material vendors need access to credit in order to rehabilitate their premises and increase their capacity and stock to meet reconstruction demands, and to mitigate the risk of being displaced by new traders. However, their plans need to take account of a return to normal turnover afterwards.* **Source:** *CRS.*

*Households in a remote village in Nepal used shelter cash assistance to purchase permanent building materials and to start work on repairs to damaged buildings a few weeks after the 2015 earthquake.* **Source:** *GOAL.*

# Amount of financial assistance

Defining categories for, and amounts of, financial assistance per household and defining eligibility for financial assistance constitute major policy and programmatic decisions, based on both financial and technical factors and criteria.

The amount of financial assistance provided is commonly defined according to intended shelter/housing output:

| | |
|---|---|
| **Shelter** | Humanitarian shelter policies define levels of assistance. They consider factors impacting emergency and temporary shelter needs such as climate, access to salvage materials, shelter material costs, rental rates, numbers affected, resources available, and housing recovery timeframes.<br><br>Shelter assistance may be provided in phases with emergency distributions of assistance taking place within days of the disaster, followed by more substantial assistance as resources are mobilised and strategies are agreed upon. Supplementary shelter assistance may be provided to targeted vulnerable households or communities, for winterisation, or other purposes. |
| **Repair and reconstruction** | Housing reconstruction policies in some cases define levels of grant assistance based on the cost of construction of a safe, basic house. The grant may allow construction of a habitable core house to be extended later, or more commonly constitutes a subsidy alongside the household's own resources (salvaged materials, finances) to build a larger house.<br><br>In other cases, levels of grant assistance may be defined as a contribution to reconstruction costs, irrespective of whether it is estimated as adequate for construction of a complete dwelling.<br><br>Housing repair policies usually define levels of grant assistance as a percentage of reconstruction grants, commonly 30-50 percent. Housing repair levels of grant assistance may be based on schedules of works, without or without budget ceilings. Different categories of damage may be eligible for different levels of grant assistance.<br><br>Loans for housing reconstruction may have a fixed limit or may be linked to the value of the property. |
| **Land** | Resettlement and reconstruction policies define levels of grant assistance for the acquisition of land where households or communities are supported to select and procure residential sites for relocation or resettlement to facilitate reconstruction. The grant is based on local land prices and may include a contribution for infrastructure or other site development works. Assistance is commonly limited to procurement of a minimal site for housing reconstruction and not replacement of agricultural lands.<br><br>Loans for land acquisition for housing reconstruction may have a fixed limit or may be linked to the value of the property |

## Case Study
## Resources on land resettlement and reconstruction

For further information see the Global Land Tool Network.

www.gltn.net

See guidance and case studies on resettlement in Land and Natural Disasters GLTN (2010)

www.gltn.net/download/land-and-natural-disasters

**Site works**

Levels of assistance for community-based site rehabilitation or development works are less likely to be defined than levels for shelter or housing reconstruction assistance. Site work policies may include fixed block grants per community or may vary according to the scope of works.

### Shelter assistance/housing reconstruction assistance:

The cost of temporary shelter and the cost of housing repair and reconstruction are both accounted for in housing sector post-disaster needs assessments and may be planned separately or together.

Financial assistance provided in the emergency phase shortly after a disaster is primarily intended to meet temporary shelter needs but is usually unconditional and therefore may also be used for repairs or to start early reconstruction depending on the housing and household situation. Housing repair and reconstruction financial assistance is usually prohibited from use for temporary shelter. Successfully meeting shelter needs is important to ensure assistance for reconstruction is used as intended.

### Full cost/partial cost:

Grant financial assistance for housing repair or reconstruction is usually provided as a subsidy, rather than the full cost of works. The reconstruction grant may be calculated to allow completion of minimal and basic accommodation (e.g. one safe durable room) with the assumption that most households will supplement the grant with their own materials, labour or funds to reconstruct a larger home or to extend a core house at a later date. The grant accelerates the rate of reconstruction and incentivises compliance with standards when disbursed in conditional tranche payments.

Housing reconstruction depends on households mobilising resources and recovery policies need to anticipate adequate time for such resource mobilisation.

### Rationales for grant amounts and differentiation:

Grant assistance for housing repair or reconstruction is not compensation-based, ie: it is not linked to the value of the property damaged or destroyed. Grant assistance is likely to be of far greater significance to lower income households who are expected to face more challenges in recovery. The rationale for basing grant assistance on the cost of rebuilding a minimal dwelling assumes the grant can cover 100 percent of the cost for vulnerable households, and in theory therefore all households would be able to rebuild.

Categories of grant assistance are usually limited (e.g. three categories: minor repairs, major repairs, reconstruction) to simplify implementation and communication of the policy. The levels of grant assistance for urban households may be higher than rural households on the basis that urban construction is significantly more expensive due to building typologies or site conditions.

Supplementary housing reconstruction financial assistance or repair assistance may be provided to targeted households or communities, based on vulnerability, location, housing types or other factors.

### Grant assistance/in-kind assistance as subsidy:

Financial assistance provided as a subsidy aims to incentivise behaviour change such as the adoption of risk reduction measures. The provision of in-kind assistance in the form of specific materials or skilled labour may also aim to ensure the adoption of risk-reduction measures (e.g. hurricane straps), particularly where materials are not commonly available or techniques are not familiar.

# Eligibility for financial assistance

| | |
|---|---|
| **Eligibility for financial assistance depends on disaster impacts on housing conditions** | • Destroyed house: house totally destroyed or damaged beyond feasible repair<br>• Damaged house: house damaged and feasibly reparable<br>• Substandard house: house vulnerable to risks or below standards<br>• Settlement damaged: housing infrastructure and services damaged<br>• Non-viable site: settlement/house destroyed and site lost in disaster, settlement/house site assessed as hazardous (house may be destroyed or not)<br>• House/site inaccessible: settlement, site or house temporarily inaccessible (e.g. due to flood inundation). Household may be eligible for grant assistance for shelter |
| **Eligibility for financial assistance may also be informed by the following factors** | • The scale of disaster: The number of houses destroyed and damaged, the total disaster damages and losses and the proportion of GDP the disaster losses represent.<br>• Resources available: The extent, level and type of insurance against disaster damage and losses, state financial resources, humanitarian and development assistance partner financial resources.<br>• Location: Disaster impacts categorised geographically, with area-based eligibility for assistance.<br>• Property status: The status of disaster-affected lands and buildings (e.g. ownership, rental, other), formal proof of status, primary residency or multiple property ownership, and identification of individual (s) eligible for assistance.<br>• Building/household composition: Multi-household buildings (e.g. apartment buildings, joint family arrangements) |
| **Implications for technical assistance** | Technical expertise and mechanisms for decision-making are required to provide the following information to facilitate planning and implementation of financial assistance:<br>• Categories of damage or disaster impacts and to determine eligibility criteria for assistance<br>• Agreed standards and specifications for shelter, housing recovery works and criteria for land<br>• Estimated costs for new construction as well as for shelter materials, shelter construction, repairs, retrofitting, siteworks and land acquisition based on the above criteria, standards and specifications<br>• Number and proportion of tranche payments, with associated levels of building completion and with inspection criteria<br>• Rationales for differentiation of assistance and supplementary assistance<br>• Estimated time frames for completion of shelter and housing recovery works including stage completion |

As financial assistance policies and programmes need to be defined as early as possible and are contingent on technical decisions, technical information needs to be progressed as early as possible and in close cooperation with those developing financial assistance.

Experience from recent disaster shows that the process of defining financial assistance is incremental, with reconstruction policies and grant amounts defined earlier than repair policies and grant amounts. Likewise, resettlement and land grants have developed later still, as relocation and eligibility for some are contentious and the funding required is considerable.

Decisions to provide supplementary financial assistance for extremely vulnerable households or for specific contexts such as urban areas have tended to arise when slow or no progress is reported for those households. However, mobilising supplementary funding is challenging long after the disaster event.

Planning for an incremental process and for contingencies at the outset balancing technical and financial perspectives could be beneficial.

*Source:* CRS.

*Source:* CRS.

## Case Study
## Addressing scale and equitable access to financial assistance for housing recovery

Conditional cash grants were provided to households for repair and reconstruction of their homes after the 2005 Kashmir earthquake and 2015 earthquake in Gorkha, Nepal. Despite the vast scale of damage, difficult terrain, and the size of population affected, in both cases, detailed damage assessments were carried out through a single government-managed process. All eligible households received financial assistance through cash transfers in tranches according to the category of damage, and robust grievance mechanisms are in place to address the issues of landless, renters, and the concerns of vulnerable groups.

The Government of Pakistan managed a programme of financial assistance to 463,000 rural and 28,000 urban households for reconstruction, achieving over 90% compliance with building standards. The Government of Nepal is currently managing a programme of financial assistance to over 810,000 rural and urban households for reconstruction.

For further information:

Earthquake Reconstruction and Rehabilitation Authority. Pakistan.
www.erra.pk

Rural Housing Reconstruction Programme Post 2005 Earthquake. Learning from the Pakistan Experience.
www.gfdrr.org/sites/gfdrr/files/publication/RHRP_PAKISTAN_WEB.pdf

See Nepal Reconstruction Authority.
www.nra.gov.np/en

Housing Recovery and Reconstruction Platform Nepal.
www.hrrpnepal.org

*Houses destroyed by earthquake in Nepal 2015.*
**Source:** *IOM.*

*Houses reconstructed after 2005 Kashmir earthquake. Pakistan.*
**Source:** *UN-Habitat.*

# Forms of financial assistance

## Grants/cash transfers

Grants or cash transfers for shelter and housing recovery include the following transfer types with summary characteristics. This list includes overlapping types or categories, for example an individual household transfer could be a conditional transfer and could be part of a social safety net transfer programme.

| Transfer type | Common characteristics |
|---|---|
| **Unconditional transfers** | • Mainly relief phase<br>• Multi-sectoral<br>• Single tranche payments<br>• Unconditional<br>• Technical criteria not critical |
| **Conditional transfers** | • Mainly reconstruction phase<br>• Single sectoral<br>• More than one tranche payment<br>• Conditional on compliance with technical criteria critical |
| **Individual household transfers** | • Individual grant for household works<br>• Tranche payments conditional on compliance by single household<br>• Individual household financial management |
| **Community transfers** | • Block grant for collective/community works<br>• Group grant for designated number of households for housing works<br>• Tranche payments conditional on compliance by collective<br>• Collective financial management |
| **Social protection/ social safety net transfers** | • Individual or household grant/transfer<br>• Expansion of or supplement to social protection transfers<br>• One-off or sustained<br>• Unconditional<br>• Often targeted to vulnerable individual/household profiles<br>• Transfers aim to increase recipients' ability to cope with housing losses rather than directly address housing reconstruction. |

Grant assistance through cash transfers may be provided by government authorities (e.g. disaster relief or reconstruction authorities, social welfare authorities, local authorities), humanitarian, or development assistance agencies.

Cash transfer programmes may involve multiple funding partners and may involve multiple implementing partners playing different roles.

Existing social protection programmes may be used to provide cash transfers to disaster-affected populations to meet reconstruction or social protection objectives. Using existing mechanisms may ensure rapid mobilisation and reduce operational costs, particularly if designed for scalable humanitarian transfer use.

Transaction costs are a critical factor in the cost effectiveness of cash transfer mechanisms.

Cash transfer programmes involve monitoring systems associated with eligibility, disbursement and compliance with conditions.

## Loans/credit

Loans for shelter and for housing recovery include:

| Loan type | Common characteristics |
|---|---|
| **Mortgage** | • Loan for housing use. Loans linked to full property value<br>• Liens against property purchase or construction<br>• Bank has a claim on the property if borrower defaults<br>• Eligibility linked to property ownership<br>• Eligibility linked to financial or employment status<br>• Regulatory compliance required |
| **Housing loan** | • Loan for housing use. Loan not linked to full property value<br>• Eligibility linked to property ownership<br>• Eligibility linked to financial or employment status |
| **Reconstruction loan** | • Loan for housing use. Loan may or may not be linked to full property value<br>• Eligibility linked to property status (e.g. destroyed, damaged)<br>• Eligibility may be linked to property ownership<br>• Eligibility may be linked to financial or employment status<br>• Terms and conditions, including interest rates, may be non-commercial<br>• Loan amounts may be determined by state or development agency funding<br>• Regulatory compliance required |
| **Loan and savings group loan** | • Loan for housing use. Loan not usually linked to full property value.<br>• Eligibility linked to group membership<br>• Terms and conditions, including interest rates, may be non-commercial<br>• Formal credit union system or informal committee system arrangements<br>• Loan amounts may be determined by membership contributions or may be determined by state or development agency funding<br>• Regulatory compliance may be required |
| **Micro-credit** | • Micro-credit by microfinance service providers for post-disaster recovery needs including replacement of productive assets<br>• Loan not linked to full property value. Loan amount relatively small<br>• Eligibility may be linked to membership of microfinance programme or other terms and conditions |

Eligibility for mortgages, housing or reconstruction loans or savings group loans may be limited to primary residence or may also be for housing development for sale or rental.

Loans are commonly procured by households eligible for government grant assistance, facilitating early access to cash for housing needs against the security of expected grant payments.

High interest informal private sector loans are commonly procured by households for shelter, rental, housing reconstruction or repair, or replacement of household goods. Such loans usually operate outside of regulatory systems, often with relaxed eligibility criteria but exorbitant terms and conditions. Loans are commonly procured by households eligible for grant assistance, facilitating early access to cash for housing needs against the security of grant payments.

Access to credit may accelerate reconstruction, thereby reducing the additional consumption costs for households of meeting temporary shelter needs, including rental.

Post-disaster credit may be problematic. There are risks for households whose capacity to repay is depleted due to losses of property and productive assets, creating or increasing debt traps from which poor households have difficulties to escape. There are risks for microfinance institutions whose portfolio quality and liquidity positions are reduced by post-disaster loans.

## In-kind assistance (non-cash)

In-kind assistance including material, labour and contracted works.

| Assistance type | Common characteristics |
|---|---|
| **Shelter materials** | • Non-food personal and household items (e.g. clothing, bedding, kitchen goods)<br>• Materials for construction of temporary shelter or emergency works to render buildings habitable (e.g. tents, tarpaulins, framing, fixings)<br>• Materials may be of fixed value agreed in shelter policy<br>• Materials may be provided if not sufficiently available in local markets in required time or of adequate quality (e.g. shelter grade plastic sheeting) |
| **Shelter labour** | • Labour engaged in support of households to construct emergency or temporary shelter and carry out emergency rehabilitation works<br>• Labour (organisation personnel) may be provided by army, civil defence, red cross, humanitarian agencies<br>• Local labour may be contracted on 'cash for work' basis to inject cash into the local economy |
| **Shelter construction** | • Temporary shelters provided or constructed for households as completed works, may include site preparation and associated services.<br>• Emergency or basic temporary works carried out to make buildings habitable<br>• Shelter construction may be of fixed value agreed in shelter policy |
| **Housing materials** | • Materials for reconstruction or repair of permanent houses.<br>• Materials may be of fixed value agreed in housing reconstruction policy.<br>• Materials may be provided if not sufficiently available in local markets in required time or of adequate quality (e.g. specialised materials for repair)<br>• Materials may be provided to incentivise compliance with standards |
| **Housing labour** | • Labour engaged in support of households to repair or retrofit existing houses or to reconstruct new houses.<br>• Skilled labour may be provided to ensure compliance with standards |
| **Housing rehabilitation works** | • Repairs or retrofitting carried out as contracted works including materials and labour.<br>• Contracts may be of fixed value agreed in housing reconstruction policy or according to agreed standards.<br>• Terms and conditions may apply for the household. |
| **Housing construction works** | • Construction of new houses carried out as contracted works including materials and labour.<br>• Contracts may be of fixed value agreed in housing reconstruction policy or according to agreed standards.<br>• New house provided to household. Terms and conditions may apply. |
| **Community labour** | • Employed labour for housing or settlement works (e.g. demolition, debris management, site rehabilitation or development works)<br>• Labour may be engaged through 'cash for work' mechanisms |
| **Community rehabilitation works** | • Settlement rehabilitation (e.g. demolition, debris management, infrastructure rehabilitation) carried out as contracted works including materials and labour. |
| **Community construction works** | • Settlement reconstruction or development (e.g. new infrastructure, hazard mitigation) carried out as contracted works including materials and labour. |

In-kind assistance may be provided directly by government, humanitarian or development agencies or may be procured by redeeming vouchers against materials or services in local markets or through dedicated warehouses.

In-kind assistance may be provided as supplementary support for selected households or communities while maintaining consistent levels of cash grant assistance as per housing recovery policies. Levels of in-kind assistance may also be determined through housing recovery policies.

## Community contracting

Community contracts are contracts awarded to community organisations or groups by government or development partners to carry out works.

| Contracted works | Common characteristics |
|---|---|
| **Physical works** | • Physical works implemented through community contracts are typically:<br>– Located within the contracted community<br>– Not technically complex or requiring specialised skills<br>– Labour intensive<br><br>• Examples include:<br>– Demolition of destroyed, damaged or unsafe houses or other buildings<br>– Management of debris, including salvaged materials<br>– Rehabilitation of infrastructure<br>– Upgrading access and circulation (roads, footpaths, steps, small bridges)<br>– Upgrading site conditions (drainage, slope stabilisation, natural resource management)<br>– Upgrading infrastructure<br>– Constructing temporary shelter.<br>– Constructing repairs or upgrades to existing houses<br>– Constructing new houses |
| **Provision of services** | Services provided through community contracts include:<br>• Provision of information to households and communities (e.g. disaster risk management advice, financial management advice for reconstruction)<br>• Provision of construction skills training<br>• Provision of skilled or unskilled construction work (e.g. for vulnerable household reconstruction) |

Community contracts may require formalised organisational mechanisms such as registered community organisations with bank accounts to facilitate financial transactions and accountability.

Community organisations may be established or strengthened after disaster to support their ability to diagnose needs, to plan and implement quality works, to ensure inclusion and communication, to manage budgets and reporting requirements.

Levels of contract value and the contract terms and conditions may be determined by donor agency regulations or by reconstruction policies. Initial contracts may involve relatively small funding with further and larger contracts contingent on successful evidence of capacity.

## Subsidies

Subsidies operated by government and other actors may support households to offset shelter and housing recovery costs. Subsidies may operate on the basis of grant funding by donors to reduce costs for households or through mechanisms such as tax relief, which represents revenue foregone by government and reduced charges for households.

| Subsidy type | Common characteristics |
|---|---|
| **Household tax relief** | • Individual/household tax relief on income tax, property tax or other indexed or flat rate household charges<br>• Eligibility may be based on disaster losses<br>• Eligibility may be based on tenure status (primary residence, landlords, tenants)<br>• Eligibility may be based on geographic criteria<br>• Mortgage interest tax relief (e.g. income tax relief on interest payments for existing mortgages or new mortgages) |
| **Subsidised services** | • Charges suspended or reduced for households on state utilities such as electricity and water or services such as education and health<br>• Eligibility may be based on disaster losses<br>• Eligibility may be based on geographic criteria |
| **Subsidised sector goods and services** | • Value Added Tax VAT relief (whole or partial reductions) on construction materials and services<br>• Subsidies to reduce the cost to consumers of construction materials such as through reduced tariffs on imported goods<br>• Tax waivers on importation of materials for humanitarian response, (e.g. tents, shelter grade plastic, timber framing, CGI sheets) for humanitarian agencies |

Subsidies may be short-term measures, time-bound from the outset, or may continue until sufficient economic recovery or reconstruction progress is achieved.

## Promotion of financial inclusion

Subsidies operated by government and other actors may support households to offset shelter and housing recovery costs. Subsidies may operate on the basis of grant funding by donors to reduce costs for households or through mechanisms such as tax relief, which represents revenue foregone by government and reduced charges for households.

| Promotion activity | Common characteristics |
|---|---|
| **Strengthen financial services sector** | • Strengthen regulatory systems for financial services by public, commercial and non-commercial operators.<br>• Develop partnerships between financial service providers and local organisations |
| **Increase access to financial services** | • Expand fixed location, mobile and online banking services<br>• Expand internet and mobile coverage and access<br>• Streamline processes for increased participation in banking including eligibility criteria<br>• Target population profiles with low participation rates (low income, rural, elderly, women, youth) |
| **Increase types of financial products and services** | • Develop savings and credit organisations, products and services<br>• Develop insurance products and services<br>• Develop remittance products and services |
| **Increase social safety net programmes** | • Establish or expand social safety net programmes including for use in post-disaster recovery and for risk reduction. |
| **Increase financial literacy** | • Develop financial service providers marketing capacity.<br>• Develop mass communication campaign to increase financial literacy and promote financial services and products.<br>• Develop field outreach activities by local development organisations to promote financial literacy and financial inclusion. |

*Many women-headed households rely on access to remittances from family members working in cities or overseas to pay for reconstruction. They also need to be signatories on bank accounts to receive government cash assistance.*
**Source:** *Vero Wijaya/UN-Habitat.*

*The household received 3000 USD in financial assistance from the Government of Nepal, but also sold family jewellery and borrowed over 8000 USD at 24 percent in order to afford reconstruction.*
**Source:** *Tsering Ngodup Lama/Kathmandu Post.*

www.kathmandupost.ekantipur.com/news/2019-04-24/four-years-after-nepals-deadly-earthquakes-survivors-continue-to-live-in-disarray.html

# Insurance

Insurance provides reliable financial relief and security for recovery after disasters, enabling people to meet emergency needs, replace assets and to carry out repairs and reconstruction. Insurance payments, like social transfers, are cited as providing greater dignity, predictability and transparency after disasters than humanitarian assistance.

Housing insurance coverage for disaster damage is currently low in low and middle-income countries and therefore plays a limited role in recovery. However, developments in insurance products along with changes in the use of financial services in humanitarian response indicate that insurance will play an increasingly important role in key recovery sectors including infrastructure, industry, livelihoods and housing.

Analysis of financial assistance includes insurance in order to ensure the development of financial services and the development of technical assistance are mutually reinforcing to meet a shared objective of reconstructing safer housing and reducing future losses.

Post-disaster housing recovery is supported by two types of insurance: **housing or property disaster insurance and disaster microinsurance.**

- **Housing or property insurance** is provided by the state or by commercial insurers. Housing or property insurance provides protection against most risks to property, such as fire or theft and includes specialized insurance such as against flooding, hurricanes or earthquakes. Insurance may exclude some perils. Property insurance is linked to property value, whether actual, replacement or extended replacement value.

- **Microinsurance** aims to provide services to those not reached by regular commercial insurance and has seen six-fold growth over the last decade to over 500 million insured in the 100 poorest countries. Microinsurance provides protection for disaster-related deaths, injuries and illness, livelihood impacts, emergency needs and for basic property and assets.

- In addition to property insurance and microinsurance, **disaster insurance coverage for construction-related businesses** (material producers, fabricators, vendors, transporters and construction contractors) of premises, equipment, stock, operations and disruptions may significantly accelerate recovery of local capacity to facilitate housing reconstruction.

## Property insurance and microinsurance and disaster risks

Both property insurance and microinsurance face opportunities and challenges to address disaster risks. Technological innovations, such as satellite imagery and mobile phone use have accelerated the speed and lowered the costs of evaluating claims in remote locations and improved insurance products and services. Improvements in risk assessments and sharing of risk data have contributed to new insurance products including index-based or parametric insurance, payouts from which have built trust and attracted a high rate of sustained participation even in low income contexts.The availability of a larger quantity and better quality data allows insurance companies to provide insurance coverage to groups in low-income contexts, where insurance has historically not been available. Participation in insurance programs is though still connected to financial literacy and education and trust in the insurance companies.

Index based insurance (IBI) represents an alternative form of insurance that makes payments based on a predetermined index (e.g. weather data), which is computed and reported by an unbiased and neutral data provider, irrespective of individual losses. IBI is an ex-ante financing model that allows rapid payments after the occurrence of disasters and thus provides immediate liquidity for governments, institutions and individuals. IBI can hence be seen as a disaster risk financing tool that allows to mitigate the impacts of major shocks.

The incidences of loss of life decrease with the degree of economic development, but material losses increase. Minor non-structural damages in developed contexts commonly incur greater insurance losses than extensive destruction in less developed contexts. The goal in building regulations in many countries has focused on life safety, but future efforts may need to be directed towards non-structural issues including: damages to finishes, services, household or personal assets, and/or shelter/rental arrangements during displacement.

Complex disasters entailing multiple aftershocks over a protracted period, or secondary effects such as wind events followed by storm surges may result in difficulties in attributing damage to specific loss agents and to process insurance claims. Consequences include delays and uncertainty for households undertaking housing repairs and reconstruction.

Insurance premiums are expensive for many poor households. Affordability often requires public or donor subvention. As extreme weather events become more frequent and impactful, insurance schemes may face increasing challenges to ensure sustainability, affordability and widespread participation. Disaster risk reduction and climate resilience strategies will require coordinated policies.

## Index-based insurance as a disaster risk financing tool

Recent technological advancement and the emergence of better and satellite and weather data has allowed to develop insurance products based on non-influenceable indices. Index-based insurance (IBI) is an alternative form of insurance that makes payments based on a predetermined index (e.g. weather data), irrespective of losses on an individual level. As there is no loss assessment required the payments can be transferred within a few weeks after a disaster, which allows for a rapid cash injection for communities and individuals, after a disaster strikes. Several studies have found that macroeconomic resilience can be achieved if there are financial mechanisms mitigating the indirect costs of disasters. A rapid payout, e.g. through index-based insurance thus allows communities and individuals to rely on a pre-agreed payout when a natural catastrophe strikes and be prepared for losses occurred through disasters.

The certainty about the payout and the rapid payout offered by index-based insurance programs allows for governments to have a better disaster risk management and secure its citizens against the impact of disasters. Ex-ante financing with index-based insurance also allows communities to reduce their vulnerabilities to natural hazards. While the risk pools allow governments to receive the payouts, the end-beneficiaries are the citizens. Index-based insurance can also be obtained by businesses and individuals who also benefit from the rapid payout after a disaster which allows them to get back to business as usual, rebuild their shops or buildings.

## The insurance sector and disaster recovery

Coping with disaster loss burdens involves cooperation between inter-related insurance stakeholders playing different roles.

| Insurance stakeholder | Roles |
|---|---|
| **Households and businesses (the insured)** | • Individuals, households or companies receiving the insurance pay-out after the occurrence of a certain event. In the case of direct approaches, individuals or companies pay a premium and receive a pay-out when the insurance agreement is triggered.<br>• May reduce the risk to their property through compliance with standards, maintenance and preparedness measures.<br>• Carry partial risk/participate in losses through coinsurance and deductibles. |
| **Primary insurers/ reinsurers** | • Primary insurers or Insurers (e.g. banks, credit unions, insurance companies) offer insurance solutions to the consumer market. They provide and secure capacity through portfolio and reserve management.<br>• Insurers may comprise partnerships between commercial and non-commercial organisations.<br>• Governments may act as primary insurers.<br>• Reinsurers (e.g. Swiss Re) offer financial products to the insurers themselves.<br>• They balance risks over wider regions and longer time and provide advice and technical assistance to primary insurers on risks, ratings and liability control.<br>• Reinsurers cover an estimated 55–65 percent of insured losses in natural catastrophes. |
| **Capital markets** | • Alternative risk transfer (ART) products transfer financial catastrophe risk to the capital markets instead of taking out reinsurance.<br>• ART products include catastrophe bonds, swaps and derivatives, used for exchange of risk between companies or for threshold related weather risks. |

| Insurance stakeholder | Roles |
|---|---|
| **Donor organisations and development banks** | • Promote and co-finance disaster risk transfer schemes for government and private insurers.<br>• Support risk pools for disaster insurance.<br>• Support schemes for disaster relief and reconstruction for governments.<br>• Provide technical assistance to governments and the private sector to reinforce disaster insurance markets and to ensure greater insurance coverage for populations at risk. |
| **Government** | • Other than being the insurer of last resort, governments can promote (and incentivize) public and private insurance schemes.<br>• They are also responsible for providing the legal framework and oversight over the insurance industry and ensuring availability of protection for as many people as possible, particularly vulnerable groups.<br>• Government's main role is disaster risk management:<br>– Developing and enforcing land use and building regulations<br>– Securing the serviceability of critical facilities and infrastructure<br>– Developing and implementing emergency response and recovery plans, coordinating stakeholders involved<br>– Promoting public awareness and action on risk management |

# Housing/property disaster insurance

Housing or property insurance may be operated by governments or by private or commercial companies, both of which take into account the determining factors listed below.

**Government/state insurance:**

- Government acts as a primary insurer
- Participation in government insurance may be mandatory
- Government may insure only structural losses or also non-structural losses (e.g. damage to surfaces, services or household assets, rental costs during displacement)
- Government basic insurance cover may be supplemented by private insurance for additional cover.

**Private insurance:**

- Private insurance may act as a primary insurer or may act as supplementary insurance.
- Participation in private insurance may be mandatory
- Private insurance may insure only structural losses or also non-structural losses (e.g. damage to surfaces, services or household assets, rental costs during displacement)
- Private insurance may supplement government basic insurance cover.
- High-value, large-scale and commercial rental housing is more likely to be covered by private insurance.
- Even in private-sector-dominated markets access to disaster risk insurance schemes is often incentivized, for example through tax deductions.

| Factors in insuring housing against disasters | |
|---|---|
| **Exclusions** | Certain particularly exposed areas or certain hazards may preclude eligibility for housing insurance (e.g. locations that are frequently flooded). Exclusions may contribute to compliance with land use regulations, but may also reduce the percentage of households participating in the insurance market and leave vulnerable or exposed households reliant on state assistance. |
| **Liability limits** | Liability limits refer to defined limits up to which losses may be compensated. Liability limits may be set for a range of levels according to property type, categories of damage or type of insurance cover. Liability limits reduce state or private insurer exposure to claims. |
| **Deductibles** | Insurance deductibles constitute the amount the insured household will pay in an insurance claim before the insurance coverage starts paying. Deductibles may be a fixed amount or calculated as percentage of the building insured value. Higher levels of deductibles reduce the number of small claims post-disaster. Deductibles and coinsurance represent self-participation in insurance, reduce overall insurer exposure and may incentivise adoption of risk reduction measures by the household. |
| **Coinsurance** | Coinsurance expresses a percentage of the loss borne by the insured household in each insurance claim. Coinsurance may be used in coordination with deductibles. |
| **Structural and non-structural losses** | Structural loss refers to the direct damage to or loss of the building. Non-structural losses including material losses (e.g. household and personal assets) and non-material losses (e.g. displacement costs such as rent). While loss of life usually associated with structural loss decreases with the degree of economic development, non-structural material and non-material losses increase significantly and in many recent cases exceed the structural losses. |

| Factors in insuring housing against disasters | |
|---|---|
| **Replacement costs** | Housing insurance calculated on the basis of replacement costs may account for only structural losses or may also cover non-structural losses. Insurance for housing recovery in large-scale disasters also need to take account of post-loss amplification including inflationary costs due to increased demand or loss of construction sector capacity particularly in small markets, or socio-political factors such as changes to building regulations and associated implications for reconstruction costs.<br>Extended replacement value or costs refers to cost increases due to requirements to meet higher specifications including changes to building regulations. |
| **Insurance and compliance with building regulations** | Access to mortgages for property acquisition or development or for post-disaster reconstruction may be contingent on adequate insurance cover and compliance with land use and building regulations. Insurance rebates may also be given for compliance with land use and building regulations. Awarding insurance rebates or awarding a mortgage on condition of compliance depends on the adequacy of codes and rigorous enforcement by qualified inspectors. If enforcement is weak or absent and compliance is only 'alleged' and not 'actual', insured disaster losses may be significant and efforts to promote compliance or adoption of risk reduction measures will be undermined instead of supported. |

# Disaster microinsurance

Microinsurance refers to 'the protection of low-income people against specific perils in exchange for regular premium payments, proportionate to the likelihood and cost of the risk involved,' according to the Consultative Group to Assist the Poor (CGAP) 2003.

Participation in microinsurance is growing rapidly in countries where large low-income populations are at risk of disasters. Microinsurance can mitigate the impact of disaster events on households and communities, but unlike housing or property insurance, microinsurance is not conceived to redress housing losses.

Microfinance services often include microinsurance for such risks as the death of the main income earner, funerals, healthcare costs, theft or property damage from fire. These risks are described as independent or idiosyncratic in the sense that they do not affect entire communities or risk pools simultaneously. Disasters also cause deaths and healthcare expenses and cause damage to property, but disaster microinsurance is distinct from other forms of microinsurance for the following reasons:



- Disaster risks are difficult to estimate.
- Disasters can affect large portions of the population or risk pool at the same time.
- Informal safety nets (family and friends) tend to break down during disasters.
- Disasters cause multiple losses simultaneously to life, health and property (covariant risk).
- Microinsurance may be mutual or cooperative based, disaster insurance with covariant risks require diversification and/or reinsurance. Insurers with limited capital reserves must guard against insolvency by diversifying their portfolios geographically, limiting exposure and/or transferring their risks to the global reinsurance and financial markets.
- Community-based risk management schemes rely heavily on personal relations between participants, limiting scalability and geographic spread.
- Formal insurance for disasters is also plagued by 'adverse selection' which means that those most at risk tend to join the pool.

## Disaster microinsurance types

| Microinsurance type | Common characteristics |
|---|---|
| **Indemnity-based** | • Claims paid based on actual losses to households or businesses<br>• Requires extensive networks of claims adjusters to assess individual losses after a disaster event.<br>• Claims are difficult to predict in advance and vary widely between claimants. Loss assessment can thus be understood as biased towards the insurer. |
| **Index-based insurance (IBI)** | • Microinsurance contracts written against a predetermined indices (parametric insurance) such as weather data, measured at a regional station, or with the help of satellite imagery. The indices are correlated to the losses of the policy holders to find the right insurance coverage. In the case of weather derivatives for crop risks, farmers collect insurance compensation if the index reaches a certain threshold, without any loss assessment.<br>• Simplifies and accelerates settling claims and reduces administrative costs.<br>• More transparent and predictable, payout is pre-agreed.<br>• Index-based microinsurance requires investment in risk estimation. |

Group contracts are a common feature of microinsurance, as groups of at-risk individuals often share one insurance contract to reduce the costs of issuing contracts and processing premiums and claims.

Insurance may be included with microsavings or microcredit operations. Insurance may be mandatory or voluntary.

Insurance may be required as a condition of grants or loans for post-disaster repair or reconstruction or for pre-disaster retrofitting. Insurance may be associated with implicit risk reduction measures (e.g. training and information) or with explicit risk reduction measures (e.g. enforcement and penalties), with policy, implementation and cost implications.

Microinsurance aims to provide services to those not participating in commercial insurance. Affordability is a major factor. Transaction costs can be reduced by using local microfinance institutions and NGOs to leverage low marginal costs, and by using index-based insurance mechanisms to reduce administration and operations costs. National government and/or international donor community support for capital reserves or reinsurance can also address affordability.

# Other insurance approaches

## Insurance Development Forum (IDF)

The IDF is a public/private partnership led by the insurance industry and supported by international organisations. The current Chairman of the IDF is AXA Group Chairman, Denis Duverne. The IDF aims to optimise and extend the use of insurance and its related risk management capabilities to build greater resilience and protection for people, communities, businesses, and public institutions that are vulnerable to disasters and their associated economic shocks.

IDF Working Groups include over 200 experts and practitioners from industry, governments, international institutions, NGOs and academia that have been engaged across different priority areas since April 2016 including microinsurance.

www.insdevforum.org

*Individual building collapse in Kathmandu after the 2015 earthquake and damaged caused to the neighbouring building. Property insurance in urban areas needs to take account of settlement as well as building and risk factors.* **Source:** *Shelter Cluster Nepal.*

## ProVention Consortium

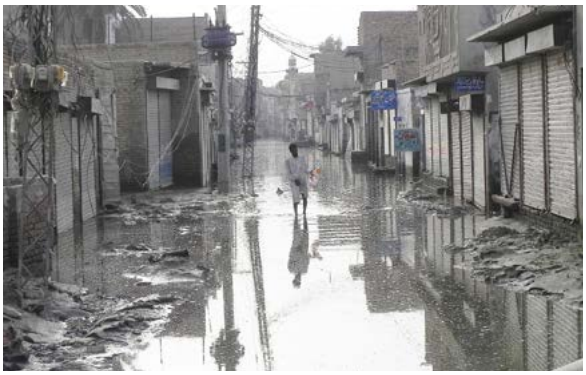
The ProVention Consortium is a global partnership of international organisations, governments, private-sector enterprises, nongovernmental organisations, and academia dedicated to reducing the risks and impacts of disasters in low and middle income countries. Risk transfer and risk sharing, as part of a disaster risk management strategy, are central themes on the ProVention agenda. ProVention interest in risk financing is linked to promotion of increased private sector involvement and investment in disaster risk management in low and middle-income countries. ProVention acts as a knowledge centre sharing resources for organisations, practitioners and communities active in disaster reduction.

www.proventionconsortium.net

## The International Labour Organisation's (ILO) Impact Insurance Facility

The ILO's Impact Insurance Facility enables the insurance sector, governments, and their partners to reduce households' vulnerability, promote stronger enterprises and facilitate better public policies. Focusing on low and middle-tincome countries, the Impact Insurance Facility acts as a global hub for innovation, knowledge and capacity development, working with governments, insurers and other stakeholders to strengthen insurance markets and embed insurance in strategies to reduce the vulnerability of populations and boost the productivity of economies.

www.impactinsurance.org



*Flooding of urban area causes damage to all exposed properties. Assessing claims and processing payments may be expedited by joint policies adapted for meteorological risks and thresholds.* **Source:** *UN-Habitat.*

## Global Index Insurance Facility (GIIF)

The Global Index Insurance Facility (GIIF) facilitates access to finance for smallholder farmers, micro-entrepreneurs, and microfinance institutions through the provision of catastrophic risk transfer solutions and index-based insurance in low and middle-income countries. Index insurance pays out benefits on the basis of a predetermined index (e.g. rainfall level, seismic activity, livestock mortality rates) for loss of assets and investments, primarily working capital, resulting from weather and catastrophic events, without requiring the traditional services of insurance claims assessors.

GIIF's strategy is to build sustainable index insurance markets and promote innovative insurance solutions through a multi-pronged approach which includes: 1) financial education, 2) capacity building and subsidies, 3) technical advice on products and pricing, 4) public policy dialogue and regulatory environment facilitation.

Funded by the European Union/ACP, Germany, Japan, and the Netherlands, the Global Index Insurance Facility is managed by the World Bank Group, as part of the Finance, Competitiveness & Innovation Global Practice.

www.indexinsuranceforum.org

## The Consultative Group to Assist the Poor (CGAP)

CGAP is a global partnership of more than 30 leading development organisations that works to advance the lives of poor people through financial inclusion. Using action-oriented research, CGAP tests and shares knowledge intended to help build inclusive and responsible financial systems that move people out of poverty, protect their economic gains and advance broader development goals.

CGAP advocates for improved design of financial products and services including in disaster insurance, to ensure the needs of vulnerable populations are met in an efficient and sustainable manner.

www.cgap.org

## Case Study
## AXA Insurance support in Unión Hidalgo after 2017 earthquakes, Oaxaca, Mexico

The earthquakes of September 2017 had a deep impact in Oaxaca, Mexico. Around 800,000 people were affected, and 64,728 homes were damaged. Unión Hidalgo is one of many vulnerable communities in Oaxaca with limited recovery capacity. Out of 3,318 homes, 1,047 homes sustained partial damage, and 1,716 were completely destroyed.

The federal government provided quick financial assistance through 'cash cards,' which were to be used for buying construction materials, but did not provide any accompanying technical support. Several assistance agencies, including the AXA foundation, decided to fill this gap in Union Hidalgo and provide technical support for the reconstruction of the community, as well as committing to reconstruct a market and 21 schools in the area.

For the participants in the program, training sessions on a specific construction material were provided, and the use of local materials and labour was encouraged. AXA engineering teams did research on soil conditions and geomorphological conditions, and provided recommendations that were incorporated into reconstruction plans. The houses that met the agreed construction standards were given micro-insurance free of charge for 3 years after completion.

In addition to the housing reconstruction activities, AXA was involved in the installment of an alarm system in the schools, seismological and risk-exposure awareness raising with the local community, and the development of updated laws and construction regulations to limit settlement in hazardous locations

*From prototype to reality.*
Source: *AXA Mexico.*

## Case Study
### Index-based sovereign pools and the Caribbean Catastrophe Risk Insurance Facility

AXA, along with other members of the private sector, has partnered with several governments to implement index-based insurance programs. In particular, sovereign pools allow several governments to pool their risks and bring down costs of insurance premiums. This innovative way of sharing the fixed costs allowed governments in the Caribbean and Central America to set up the Caribbean Catastrophe Risk Insurance Facility (CCRIF) in 2007. Pooling the risks amongst the governments into one portfolio lowers the capital needs for paying claims. Today, the CCRIF covers 21 countries and more than 23 million people from earthquakes, tropical cyclones, and excess rainfall.

In October 2018, Tropical Storm Kirk devastated Barbados and the country's excess rainfall insurance cover triggered a payout of 5.8 million USD, which was paid to the government within 14 days after the index triggered. Since its inception, the CCRIF has made payouts totaling 136.3 million USD to 13 member governments in the Caribbean and Central America.

CCRIF represented an innovative partnership with the private sector and has since been followed by governments in the Pacific through the Pacific Catastrophe Risk Assessment and Financing Initiative (PCRAFI).

Further reading on index-based sovereign pools can be found in the following resources:

GNDRR
www.gndr.org

Understanding Risk
www.understandrisk.org

Unbreakable: Building the Resilience of the Poor in the Face of Natural Disasters
www.gfdrr.org/en/publication/unbreakable-building-resilience-poor-face-natural-disasters


*Field personnel trained on hurricane resistant timber frame construction.*
**Source:** *CRS.*

# CHAPTER 5
# Training and capacity development

Training and capacity development or human resource development refers to the acquisition of skills and competencies in order to execute tasks or to train and inform others. Developing skills includes developing awareness or knowledge, but this chapter does not discuss related processes of developing public awareness or community mobilisation which are addressed in chapters 7 (mass communication) and 8 (community-based outreach and engagement).

As described in the NSET Nepal diagram in the introduction, developing awareness creates demand for improvements, developing capacity or skills creates the means to execute those improvements.

Developing skills capacity for housing recovery requires planning for both quantity and quality, the number of people to execute various tasks and their levels of competency to execute tasks to required standards.

The chapter is organised by target groups and their training or capacity development needs: *non-skilled workers, construction workers, construction material stakeholders, construction professionals, recovery programme personnel, local partners, government officials and media.*



## Why does it matter?

Poor construction quality is a major factor in the poor performance of buildings and resultant damage in disasters. This includes poor materials, poor design and poor workmanship, all of which will need to be improved in order to achieve acceptable levels of safety in future. Improving design and workmanship requires improving the competencies of construction workers and professionals. Improving materials requires improving the competencies of material producers and fabricators. Improving construction quality in housing recovery therefore requires upskilling of all personnel in construction. Improved skills alone will not guarantee better construction, but are a necessary prerequisite. The scale and pace of construction activity after a disaster may be significantly higher than in normal times, generating an increase in new construction workers and an additional challenge to the task of ensuring all involved in construction are competent to build back better.

*Village residents committee from Majengo going through new maps after a successful participatory design and mapping exercise in Kilifi, Kenya under the Participatory Slum Upgrading Programme (PSUP) in 2016.*
**Source:** *Julius Mwelu/UN-Habitat.*

Technical assistance is a people-based activity, requiring a large number of roles, from defining building regulations to advising households on construction budgets, and from government, private sector, and assistance backgrounds. Without competent personnel in place, technical solutions are not devised, financial assistance is not disbursed and households do not have access to advice and guidance. All personnel involved in supporting households to rebuild are part of a collective process, with interrelated roles, where they aim to ensure technical assistance covers all information needs in a timely manner. Human resource strategies seek to harness existing and develop new capacity, deploying expertise and experience as efficiently and effectively as possible.

Common core curricula can assure accuracy and consistency in training activities, and contribute in turn to accuracy and consistency in disseminating policies and standards in technical assistance activities and compliance with standards in construction. Common curricula and certification enables flexibility through interoperability between agencies. Technical assistance is characterised by

numerous and diverse stakeholders, including many organisations new to the country or new to the role. Common curricula and joint training play a vital role in building stakeholder coherence.

Personnel involved in various roles in housing recovery, from senior government officials to masons may all be expected to need access to information, guidance and advice. Training needs to be broader than construction, to develop leadership, project management, information management or communication skills, for example. Training methodologies may be equally diverse, beyond formal classroom-based learning to include on-job training, mentoring, research, advice, scenario sessions and practical projects. Housing recovery is dynamic, training must respond to an evolving situation. A training and capacity development strategy can facilitate broad scope, diverse methods and continuous incremental planning and implementation.

Developing skills may be conceived only in relation to recovery tasks or may be considered as an institutional and sectoral investment in sustainable human resources and longer-term resilience. People are an investment. After homes are built or repaired, skills, knowledge and experience remain as key outcomes. Maximising this outcome depends on training and capacity development receiving greater attention and dedicated planning beyond training masons in hazard-resistant construction which is the common and very limited extent of training described in many recovery programmes. Housing recovery may be viewed as an unprecedented learning opportunity for all involved, with learning supported and valued at all stages and levels of the process.

The chapter introduces a wider range of target groups and their training or capacity development needs: *non-skilled workers, construction workers, construction material stakeholders, construction professionals, recovery programme personnel, local partners, government officials and media.*

*Field personnel trained on hurricane resistant timber frame construction.*
**Source:** *CRS.*

*Participant in recovery training. Haiti.*
**Source:** *Michelle Marrion.*



# Strategy for training and capacity development

## Assess damage and losses, capacity and needs:

- Assess pre-disaster policies, standards and regulatory systems relating to training and skills, including education and training providers, curricula, certification and registration of personnel.
- Assess pre- and post-disaster training capacity (premises, staff, equipment) including requirements for restoration or expansion of training capacity.
- Carry out training needs assessment, including numbers, knowledge and skills

## Develop a sequenced plan based on actual resources:

### Based on the above assessments develop sequenced plans to:

- Mobilise training and capacity building stakeholders and resources
- Define institutional leadership and coordination mechanisms
- Define training strategy: target numbers, profiles, time frames, knowledge and skills, through formal and informal training and capacity development initiatives.
- Restore training capacity including rehabilitation of premises. Expand training capacity including temporary capacity to support recovery.
- Revise and develop curricula to support housing and settlement recovery
- Upskill existing and train new trainers including on recovery-related curricula
- Define validation mechanisms for curricula, certification and registration
- Establish mechanisms for documentation, institutionalisation and transfer of training and capacity building resources: (curricula, reference materials, monitoring systems, trainers and participants)

### Establish systems for coordination, information management, monitoring and evaluation.

### Information management systems to support data on and analysis of:

- Information on training providers, available training, eligibility, terms and conditions, certification processes.
- Information on curricula, teaching and learning resource materials
- Trainers, including training of trainers
- Training provided
- Training participants
- Training costs and funding

*Practical steel fixing training on a temporary open site.* **Source:** *GOAL.*

### Monitoring and evaluation systems to support:

- Monitor supply of and demand for various trainings
- Monitor rate of training participation and completion
- Evaluate knowledge and competencies of trainers
- Evaluate knowledge and competencies of training participants
- Evaluate application of training in relation to compliance with building standards
- Evaluate cost-effectiveness of training activities
- Evaluate institutionalisation of training, capacity building and human resource development measures.
- Evaluate lessons learned for human resource management in future disaster recovery.

## Risks and challenges

Urgent demand for personnel in recovery activities may preempt their availability for training, including senior officials managing recovery with limited access to guidance and masons carrying out construction replicating previous shortcomings.

Training provided very early may be forgotten before application. Early training without follow-up may fail to analyse how learning is applied or adjust training to emerging needs. Personnel who join programmes or the labour force at later stages in recovery may not have access to training opportunities.

The development of skills and understanding requires adequate time, practice and reflection. Very short training or one-off training risk limited traction and internalisation and may result in limited increase in knowledge and competency. Common training deficits include inadequate applied or practical training, usually due to time and funding constraints.

A strong focus on developing engineering competency is commonly required to promote and execute improved construction. However, experience from disaster recovery cases across many contexts highlights the importance of developing a wider range of competencies, particularly in communication, community liaison and information management, without which engineering inputs have limited impact.

The development of key curricula is contingent on the availability of policy decisions and confirmation of standards and is subject to revisions or additions which may require refresher or update training. Delays and modifications can affect the planning and implementation of training programmes.

Training and capacity building for housing and settlement recovery requires a range of curricula and materials to be developed, each involving investment of expertise. Duplication of efforts on similar tasks represents inefficient use of time and resources and poses challenges to assure consistency and quality

Monitoring and reporting training and capacity building activities present different challenges to tracking more tangible construction activities. Without agreed definitions and categories, one-hour orientation sessions and two-week practical training, for example, may be counted as equivalent, with implications for planning and analysis. Experience from recovery cases highlights recurring difficulties due to lack of timely development of information management systems for training.

Curricula for recovery activities may be limited to facilitating tasks and not institutionalised by authorities, by education and training stakeholders or by respective sectors, for future disaster management or for continued development (e.g. damage assessment training, engineering training, vocational training).

*An existing school building used for training sessions at weekends.*
**Source:** *Internews*

## Factors to consider

The construction sector and the housing sector are both predominantly informal and operate outside of regulations. Developing and implementing training to promote change, including compliance with standards, needs to be based on understanding the respective sectors, actors, practices and attitudes.

Pre-disaster human resource capacity, including numbers of personnel, and levels of education, knowledge and skills, in government authorities, private and assistance sectors will affect post-disaster recovery and needs for capacity development. Capacity may be depleted through disaster deaths and injuries, out migration or other factors. Personnel may be sourced from outside the area to work in recovery with implications for permits, regulation, availability for training and language.

The range and appropriateness of curricula, training facilities and providers pre and post-disaster, across all relevant sectors will inform the planning and implementation of training and capacity building for recovery. Existing curricula and trainers will require apprising in accordance with new policies and regulations.

The range of diverse recovery contexts, urban and rural, varying construction techniques, social groups, cultural groups and languages may require a range of policies and standards and associated training activities. Field personnel may only need to master topics relevant to their areas. Specialised personnel or teams may be deployed to support complex or specific topics, areas or issues.

Government leadership of training and human resource development strategies may secure linkages with the national construction and education stakeholders to build broad ownership of better building agendas, wider and sustained application of curricula.

Investment in curricula development as early as possible can help organisations and the construction sector build capacity in time for increased recovery activity. If policy and standard decisions are pending, other foundational curricula may be developed and training implemented such as communication and community mobilisation, construction material quality improvement and information management skills.

Training and capacity building may be anticipated as a continuous, iterative and incremental process over the duration of recovery based on sustained engagement with participants. Training content will need to be adapted according to evolving

policies and field situations and according to feedback and the monitoring of learning and application. Ensure training opportunities are repeated or sustained for access by new personnel.

Experiential learning, or learning-by-doing including practical exercises, on job mentoring, and participation in demonstration construction and field activities are effective means to gain understanding and master skills, to remember information and to actively engage in peer discussion and reflection. Practical learning may require dedicated funding or may be incorporated into the design of field outreach and other activities.

Training is most effective if it is accessible and designed around the priorities, needs and constraints of participants, including location, venue, timing, duration, literacy levels, language and costs.

Opportunities may be identified to upskill all personnel involved in recovery to optimise their individual and collective effectiveness: how government officials hold meetings, how block producers manage their businesses, how engineers talk to house owners. Acquiring knowledge and skills may be promoted through training and through organisational design strategies such as deploying multidisciplinary teams facilitating continued mutual learning and exchange.

*Masonry training.*
**Source:** *SDC*

*Training recovery programme personnel. Philippines.* **Source:** *UN-Habitat.*

## Target groups for training and capacity development

Guidance for training activities is structured by target groups, because training is likely to be best organised for similar people, playing similar roles and with similar training needs. The groups represent broad categories. Clearly, even a group of masons in one neighbourhood could include young and old, contractors and day labourers, with local or overseas experience and varying levels of literacy. Ideally, training anticipates different levels and backgrounds and promotes opportunities for participants to learn from each other as well as from training providers.

Target groups also differ in terms of numbers. Very large numbers of masons will require training. Media stakeholders are likely to be few. Training for masons will need large scale strategies, funding and formal quality assurance mechanisms. Training for media may be ad hoc, opportunistic and not contingent on funding.

Indicative numbers from training programmes combined for all agencies after the 2005 Kashmir earthquake in Pakistan illustrate the differences in target group numbers and the cascade strategy to reach 50,000 masons for training as well ensure consistency and quality at all levels.

| Profile | Number | Training duration |
|---|---|---|
| Senior structural engineer | 25 | 6 months (including on job) |
| Engineer | 100 | 6 weeks |
| Sub engineer | 500 | 2 weeks |
| Master mason | 5000 | 3 weeks (including practical training ) |
| Existing Mason | 50000 | 1 week (including practical training) |
| New mason | N/A | 2 months (plus on job) |

Human resource requirements for housing recovery include the following main categories or target groups:

- Basic skills/vocational (for non-skilled workers)

- Construction workers (for existing/skilled workers, contractors, masons, carpenters, steel fixers)
- Construction sector material/producers and distributors (construction material and plant importers, producers, fabricators, distributors, vendors)
- Construction professionals (engineers, architects, quantity surveyors, site supervisors)
- Recovery programme personnel (government and non-government managers, social, Information management, communications)
- Local partners (local NGOs, CBOs, civil society organisations, education providers, professional institutes and trade organisations, religious groups, philanthropic organisations)
- Government officials, policy and decision makers (elected officials, civil servants, military personnel, national and local authorities, line department and disaster management officials)
- Media (journalists from traditional and digital media, media owners, network operators)

Each target group includes subgroups that will play different roles in housing recovery and have specific training needs. The descriptions of training in the various target groups illustrate overlaps or potential linkages as the target groups have overlapping interests and are not discrete but connected also as a series of networks.

*A temporary school tent structure used for training.* **Source:** *Vero Wijaya/UN-Habitat.*

# Guidance for training activities

# 5.0 Basic Skills/vocational

## Profile

- Local unskilled
- Young people
- Women
- Household members
- Migrant unskilled

## Training objective

- Increase labour supply for reconstruction
- Increase construction quality long term
- Increase employment opportunities through increased skills, particularly for low income groups

| | |
|---|---|
| **Output** | • Participants with basic skills in construction<br>• Participants with knowledge of building standards and regulations and of reconstruction policies.<br>• Participants with work experience and connections to employment opportunities |
| **Training type** | • Vocational training (typically 1-6 months, may be accelerated post-disaster)<br>• On the job training (supervised apprenticeship) |
| **Duration and timing** | • Training may take place at any time post-disaster according to demand.<br>• The duration may be accelerated to meet extreme and urgent labour shortages, or due to other factors such as seasonal constraints. Accelerated training may be supplemented afterwards.<br>• Non-construction seasons (e.g. winter, monsoon) may be convenient for training participants if already engaged as unskilled construction workers. Less busy agricultural seasons may be convenient for rural participants.<br>• On the job training, placements or other supervised apprenticeship will be determined by the construction schedule. |
| **Training scope** | • Construction (masonry, carpentry, steel fixing, concreting)<br>• Finishing (plastering, tiling, painting)<br>• Services (electrical, plumbing)<br>• Furniture and fittings (joinery, metalwork, weaving)<br>• Construction in local traditional (e.g. timber frame, stone) and new conventional (RCC, concrete block) technologies as appropriate<br>• Multi hazard resistant construction measures<br>• Reconstruction policies |
| **Training providers** | • Existing vocational training providers (government, private sector, NGOs)<br>• Post-disaster reconstruction agencies |

## Factors

### Eligibility and targeting:

Formal vocational training may have eligibility criteria, fees or other constraints that limit participation, and may need modification or supplementary measures to accommodate target participants.

Participants may need basic literacy and numeracy support, in advance or incorporated in training.

Targeting measures for groups such as young people or women may include stipends, childcare or tailored course content.

### Curricula:

Existing curricula may be revised to incorporate new standards, including hazard resistance measures.

Courses may be accelerated to meet increased demand and urgency.

On-job training requires structured planning and implementation to ensure competencies are attained.

Vocational and on-job training may be combined.

All basic skills training requires both theory and practical learning.

## 5.0 Basic skills/vocational

Training should be in local languages including local construction terminology.

### Facilities and resources:

Existing vocational training centres have facilities and equipment already available and can be optimised.

Expansion or upgrading of existing may be more efficient and sustainable than investment in new facilities.

Centralised training may be more convenient for urban participants but inconvenient for rural or dispersed participants.

Training may operate in a range of rented, temporary or makeshift premises.

Premises require: classroom space, secure storage for tools, equipment and materials, (outdoor) space for practical construction exercises, water supply/storage, electricity supply/generators.

On job training may take place on sites managed by organisations or managed by contractors on private property.

Basic skills' training focuses on practical exercises and requires construction materials and tools. Some materials may be reused in multiple trainings.

Participants may be provided with toolkits, sample timber joints, steel models or other materials on completion of training.

Printed course materials for trainers and for participants.

Demonstration construction and display materials.

On-job training may require surplus materials for practice.

### Personnel:

Education and construction personnel are required

Trained and/or experienced in vocational training or adult learning.

Highly skilled and experienced construction workers.

Training programmes also require logistical, administrative and outreach roles.

### Funding:

Course duration is relatively longer

Construction materials are necessary for practical learning

For some skills, specialised equipment or facilities are needed (e.g. joinery)

Investment in facilities should consider long-term feasibility and long-term sustainability.

Support for participation by target groups may include stipends, transport or accommodation

Tools or other items may be provided to participants on course completion

On job training requires confirmation of construction budgets and schedules

### Migrant workers:

Vocational training for potential migrant workers intending to work in reconstruction may take place at their locations of origin, incorporating post-disaster training terms and conditions (curricula, duration, support etc.).

## Case Study
## Vocational training for male and female builders

Sanju Bishwakarma from Gorkha is a lead mason known for her skill in steel fixing. Although female masons report that some families are reluctant to hire them, many people now seek out Sanju based on her reputation for high-end work. She is also building her own home. Sanju has worked with CRS Nepal and Caritas Nepal to encourage other women to participate in 50-day vocational mason training.

Over 1000 unskilled local labourers have participated in CRS's 50-day vocational training. 3428 unskilled women have graduated from 50-day vocational training provided by assistance agencies in Nepal, representing around 25 percent of all graduates in vocational training for masons after the earthquake. Vocational training provides an opportunity to develop new masons to meet the demand for skilled labour for housing reconstruction. However, participants in vocational training need to commit a large chunk of time to the training course, which can be a challenge. For example, at certain times of the year people might be busy with farming work (planting, harvesting), or for women it may be difficult to manage with their responsibilities at home. 50-day training should be seen as a first step towards becoming a mason. Further opportunities, such as building demonstration houses, can enable trainees to practice the hazard-resistant measures they learned in training under supervision.

*Source: CRS.*

www.crs.org/sites/default/files/tools-research/case_study_28_nepal.pdf

www.crs.org/our-work-overseas/research-publications/shelter-settlement-and-infrastructure-case-studies

# 5.1 Construction workers (for existing/skilled workers)

## Profile

- Local masons, carpenters, steel fixers
- Local contractors
- Migrant masons, carpenters, steel fixers
- Migrant contractors
- Construction service workers (e.g. electricians, plumbers) and construction finishing workers (e.g. plasterers)

## Training objective

- Increase reconstruction quality and compliance with standards
- Mobilise construction workers to promote recovery policy objectives including risk reduction and sustainable housing
- Improve construction management and business capacity

## Output

- Participants with improved construction skills and knowledge
- Participants with knowledge of building standards and regulations and of reconstruction policies and programmes.
- Participants access business opportunities in reconstruction.

## Training type

- Modular training (from 1/2 day-2 weeks per module)
- Participation in demonstration/model house building and associated events
- On-job training for recovery programme staff, e.g. mobile teams

## Duration and timing

- Training module duration may range from 1-2-hour information sessions to 1-2 weeks including practical construction exercises.
- Participation in training associated with demonstration building will be determined by the construction schedule.
- Training on policies and core standards should take place as early as possible to ensure compliant rehabilitation and reconstruction.
- Training inputs will be required over the duration of recovery; for later participants, for follow up with early participants, for policy and standard revisions and for additional technical guidance topics on sustainable housing.
- Training events including demonstration buildings coincide with local reconstruction timing.
- Non-construction seasons (e.g. winter, monsoon) may be convenient for training participants.
- Short training/demonstration events may be organised on weekends or in conjunction with local market days, religious observance or other gatherings.

## Training scope

- Reconstruction policies, programmes, terms and conditions
- Community mobilisation, negotiation and communication

**Quality assurance and multi hazard construction in all locally appropriate:**

- Traditional technologies (e.g. timber frame, brick)
- Conventional technologies (e.g. concrete block, reinforced concrete)

**Depending on the context:**

- Building damage assessment
- Building repair and retrofitting techniques
- Conservation of heritage buildings
- Energy efficiency and environmental performance
- Sustainable household water management and sanitation
- Site works, plinths, aprons, retaining walls, drainage

# 5.1 Construction workers (for existing/skilled workers)

## Training scope

**Construction management:**

- Site surveying
- Building design
- Building estimation, quantity surveying,
- Accountancy, financial management and financial planning
- Communication and information technology
- Site and plant management, personnel management, health and safety

**Follow up:**

- Monitor the construction practices of training participants directly after completion and at regular intervals thereafter.
- Identify continuing shortcomings to inform training curricula, for refresher training and to address through other technical assistance measures e.g. public information campaigns.
- Meet with training participants to answer questions and to collect feedback.

**On-job training for construction workers employed as recovery programme staff in addition to the above:**

- Needs assessment and project development
- Documentation and reporting
- Monitoring and evaluation

## Training providers

- Existing vocational training providers (government, private sector, NGOs)
- Post-disaster reconstruction agencies (not sure about this, need consistency throughout the doc)

## Factors

**Eligibility and targeting:**

Current local construction workers and contractors are priority participants.

Retired local construction workers should participate to become trainers or promoters formally or informally in their communities.

Local community cooperation can support identification of local construction workers and their participation in training.

Migrant workers and contractors may attend training at origin or in reconstruction locations.

Training providers may operate screening interviews or other measures to ensure participants are experienced construction workers.

Formal education should not limit eligibility.

Target participants may be reluctant to attend training at the expense of work opportunities. Training planning may address this challenge through timing (in non-construction seasons), short duration, convenient locations, support for transport, stipends or other measures.

Training and certification may be mandatory.

Trades such as painters and electricians should be aware of reconstruction policies including standards and hazard resistance to promote information in the community.

**Curricula:**

Existing curricula may be revised to incorporate new standards, including hazard resistance measures.

All training requires both theory and practical learning.

Training should be in local languages including local construction terminology.

Core curricula can be localised through incorporating local examples, including building damage, local good practices and on-site discussions.

Curricula will evolve as standards and guidance are determined, including additional technologies, solutions to field problems, updates to reconstruction policies.

Training on topics such as rainwater harvesting or energy efficiency may be developed and provided at later stages in recovery.

Business development courses may be provided by other training partners

Training should be demand-led, according to local context, local community and local construction worker needs.

## 5.1 Construction workers (for existing/skilled workers)

### Facilities and resources:

Training for existing construction workers needs to be accessible and convenient to facilitate participation.

Training may be decentralised and mobile within communities or centralised with dedicated facilities, or a combination of both.

Training may operate in a range of existing facilities, rented, temporary or makeshift premises according to the type of training, short information sessions have different requirements to classroom learning or practical exercises.

Existing vocational training centres or other education facilities, government premises, community halls, or other publicly accessible spaces may be utilised.

Premises require: classroom space, secure storage for tools, equipment and materials, (outdoor) space for practical construction exercises, water supply/storage, electricity supply/generators.

Training may be a key activity in reconstruction resource centres established as focal points for information and support, with display information, demonstration buildings or models, and advisory or support services. See Reconstruction centres.

Training on demonstration or model buildings may take place on sites managed by organisations or on private property.

Skills' training with practical exercises require construction materials and tools. Some materials may be reused in multiple trainings.

Participants may be required to bring their own tools.

Participants may be provided with sample timber joints, steel models or other materials on completion of training.

Printed course materials for trainers and for participants.

Demonstration construction and display materials.

Training on demonstration/model buildings may require surplus materials for practice.

### Personnel:

Education and construction personnel are required:

Construction professionals (e.g. engineers) trained and/or experienced in vocational training, adult learning or technology transfer.

Highly skilled and experienced construction workers for practical demonstration and guidance.

Business development skills personnel may include: literacy, numeracy, financial management, or project management expertise.

Training programmes also require logistical, administrative and outreach roles.

### Funding:

Course duration is relatively shorter, but implementing series of trainings, outreach and follow-up requires sustained funding for training programme personnel and operations.

Construction materials are necessary for practical learning.

Investment in facilities will require flexibility according to local conditions and options available.

Support for participation by target groups may include stipends, transport or accommodation.

Tools or other items may be provided to participants on course completion.

Demonstration/model buildings and associated activities require confirmation of budgets and schedules.

### Migrant workers:

Training for potential migrant skilled workers intending to work in reconstruction may take place at their locations of origin.

Training for migrant skilled workers already present in reconstruction areas may require different approaches than local skilled workers, (e.g. mobilisation, language).

## Case Study
## Development Workshop Vietnam: training to prevent typhoon damage to roofs

Development workshop has provided training to local building brigades in the communes where it works in central Vietnam since the 1980s, in order to improve the general quality of building, and develop skills in disaster-resistant construction. Trained builders both work on local construction programmes that bring in revenue, and act as building advisors to families in the community. The images above (left and centre) illustrate practical training for builders on the installation of restraining bars on an existing roof to prevent typhoon damage and (right) installation by builders of restraining bars on a new house.

www.dwf.org/en/english/vietnam

*Source:* *Development Workshop.*

## Case Study
## Reviving and transferring local traditional building knowledge and skills in reconstruction, Pakistan 2005

Delaminated walls, with no through-stones represented a common pattern of building failure, which was easy to see and learn from in partially damaged buildings. Mason training for reconstruction included learning from the damage and reviving traditional, local knowledge to place through-stones in stone masonry that hold the wall together.

Local, experienced master masons played key roles in identifying and transferring local building knowledge and practical skills to other masons, including the selection, preparation and placing of through-stones. Practical exercises used mud mortar so that stones could be recycled over a series of training sessions, rebuilding the same wall, saving material costs and space in the training centre.

*Training masons in traditional earthquake resistant stone masonry techniques. Pakistan.* **Source:** *GOAL Ireland.*

*Earthquake damaged wall showing typical pattern of delamination. Pakistan.* **Source:** *GOAL Ireland.*

## Case Study
### Pre-earthquake training initiatives provided a strong foundation for training in recovery, Nepal 2015

Before the 2015 earthquakes in Nepal, significant progress had already been made on the development of building codes for earthquake-resistant housing construction (1994), with some parts revised in 2015, and associated curricula for engineers, skilled masons, and vocational training curricula for unskilled labourers (including revisions following the earthquake in 2011). The training curricula were developed with support from technical assistance resource agencies, including NSET Nepal and Helvetas. Curricula had been used in community-based outreach programmes over the previous decade and formalised by the Ministry of Urban Development (MoUD) and the Department of Urban Development and Building Construction (DUDBC). After the earthquake, the training curricula only required minor review and revisions, which were carried out quickly by the same stakeholders.

With curricula available, MoUD, DUDBC and NSET Nepal, supported by the Shelter Cluster, initiated training of 53 trainers from 18 agencies in November and December 2015, to expand the geographic coverage of training for skilled workers as a priority, and to ensure consistent use of a common, agreed upon, and tested set of curricula. Joint and early training of trainers enabled new agencies to benefit from the guidance of experienced engineers and adult learning personnel. Training of trainers was also provided to many of the engineers newly appointed by the government as building inspectors in the disaster-affected districts. Refresher training was provided in 68 sessions to almost 1600 government personnel and assistance agency staff by MoUD and the Housing Reconstruction and Rehabilitation Platform (HRRP), which supported coordination after the Shelter Cluster. Training was on an ad hoc basis, covering policy changes and new technical guidance as they evolved. Existing curricula and early coordination established an initial strong foundation in training, but ensuring consistency during implementation proved difficult in a large and decentralised recovery, and reflected the uneven distribution of resources in technical assistance.

www.ctevt.org.np/page.php?pagecat=3

www.hrrpnepal.org/hrrp-reference-library/dudbc#

# 5.2 Construction sector material producers and distributors



## Profile

- Material producers:

  Businesses and individuals involved in

  - Extraction: quarries, stone, gravel, sand
  - Forestry and Harvesting: timber, bamboo, reeds
  - Processing: timber seasoning, cutting
  - Production: clay bricks, concrete blocks, roofing tiles,
  - Fabrication: steel reinforcement, timber trusses
  - Fixtures and fittings: plumbing, electrical, furniture
  - Equipment: shuttering formwork, scaffolding, electrical and hand tools
- Material Vendors:
  - Importers, wholesale and small-scale vendors, shops, yards, markets

*Government engagement with construction industry stakeholders (importers, producers, vendors, transporters) on issues such as rates, financing, tax, etc. are addressed under institutional arrangements.*

## Training objective

- Ensure households can access affordable, quality materials required for reconstruction through construction sector development:
  - Increase supply of materials required for reconstruction
  - Increase access to materials in reconstruction areas
  - Improve quality of materials
- Mobilise construction sector stakeholders to promote recovery policy objectives including quality assurance, risk reduction and sustainable housing.
- Improve construction materials and services long term.

## Output

- Participants with knowledge of building and material standards and regulations.
- Participants with knowledge and skills to select/produce materials to required quality.
- Participants with improved business development/management skills.
- Participants with knowledge of recovery policies and programmes.

## Training type

- Information sessions on regulatory and recovery policy matters.
- Information sessions for vendors on reconstruction standards and quality assurance.
- Material/component specific practical training for producers on site.
- Business development training course for producers and vendors.

## Duration and timing

- Information sessions may range from 1-2 hours to 1-day sessions.
- Sessions should take place as early as possible but may require later updates for policy or standard revisions.
- Regular discussions with producers and vendors over the course of recovery capture their views on reconstruction progress, challenges and opportunities to inform policies and programmes.
- Non-trading days/hours (e.g. weekends, evenings) may be convenient for off-site training or information sessions.
- Trading days/hours may be more convenient for practical training/advice when plant is operational and staff are present.
- Practical training and demonstrations may be required as early as possible to promote good practice clearly and easily, but may also be required at regular intervals to address deficiencies or to introduce new measures.
- Business development training duration and timing may vary widely, from short informal advice on-site to extended formal courses off-site, depending on needs and capacities available.

## 5.2 Construction sector material producers and distributors

### Training scope

**Information sessions to provide and collect data:**

- Data provided on:
  - Regulatory systems for construction materials and buildings (standards, quality assurance, testing, authorities).
  - Reconstruction policies, programmes, terms and conditions
- Data collected on:
  - Material producer and vendor locations, contact details, profiles, information and training needs.

**Practical training:**

- At central training locations, at selected production sites with groups of producers, or on-site with individual producers:
  - Material and component specifications, selection, composition, grading
  - Techniques for preparation, preservation, production or fabrication
  - Quality assurance testing
  - Site management, equipment operation and maintenance
  - Environmentally sustainable resource management
- On construction sites:
  - Services, fixture and fitting specifications and quality assurance
  - Formwork, scaffolding, plant, equipment and tool specifications, operation and maintenance

**Business management:**

- Production and stock management, estimation
- Accountancy, financial management and financial planning
- Information management
- Property and plant management
- Personnel management, health and safety
- Market analysis, marketing, customer service

### Training providers

- Regulatory officials
- Construction industry professional body representatives
- Vocational training/adult education providers
- Business training providers
- Post-disaster reconstruction agencies

### Factors

**Eligibility and targeting:**

All local producers and vendors are all eligible for information.

Producers and vendors may be registered with authorities for licensing or tax.

Local chambers of commerce, professional institutes, guilds or business networks may also support identification, contacts and mobilisation.

Training and advice may be targeted to prioritise producers and vendors of substandard materials and services, of new materials and services, or new businesses or staff.

Non-local producers and vendors may require different approaches for identification and provision of training or advice.

Business development and other training may be offered according to demand.

Target participants may be reluctant to attend information sessions or training at the expense of work opportunities. These challenges may be addressed through timing

duration, locations or other measures.

Training and certification may be mandatory or related to licensing.

### Curricula:

Curricula may be developed from existing and post-disaster regulations, standards and good practices.

Curricula may also incorporate analysis of common defects in quality and practice, deficiencies in supply and respond to information needs.

Existing curricula for business development may be revised to incorporate reconstruction challenges and opportunities such as rapid growth, temporary demand, evolving policy and regulatory context.

On-site training to diagnose issues, provide and demonstrate advice and to follow up.

### Facilities and resources:

Information sessions may take place in any accessible premises meeting requirements for capacity and planned activities (e.g. discussion, display or presentations).

Practical training for groups may be organised where production issues can be demonstrated, either in training or testing facilities, or on-site (quarries, forests, workshops, construction sites) according to the topic.

Practical training and advice for individual producers or vendors on-site at their place of business.

Business development training may take place in educational facilities or other premises appropriate for group learning purposes.

Information sessions may require display materials, demonstration or sample materials and tools, testing equipment.

Information session participants may be provided with print materials or samples to take away, including for display on their premises.

Practical training may require construction materials, tools or equipment.

Business development training requires teaching and learning print materials.

### Personnel:

Information sessions may be organised.

Education and construction personnel are required:

- Construction professionals (e.g. engineers) trained and/or experienced in vocational training, adult learning or technology transfer.
- Highly skilled and experienced construction workers.

Business development

Training programmes also require logistical, administrative and outreach roles.

### Funding:

Support required for producers and vendors depends on existing construction sector capacity and reconstruction needs and may vary widely from minimal information to extensive training and development, with associated implications for funding.

Information sessions, practical and business training may be funded by construction sector stakeholders, including provision of premises, logistics, materials, personnel (by industry federations, financial sector)

Training may be associated with financial assistance (grant or credit) programmes for construction sector development.

Training may be funded by participant contributions or fees.

Training may be associated with institutional investment in regulatory enforcement and quality assurance. (e.g. inspectors may advise on how to improve production standards)

### New businesses:

New businesses established or arriving after the disaster may require additional training or technical support, including feasibility, market analysis, and business development.

## Case Study
## Small and Medium Enterprises (SME) training and capacity building after Typhoon Haiyan, Philippines

In the Philippines, SMEs account for 90 percent of the private sector and employ 65 percent of the labour force. Typhoon Haiyan (Yolanda) in 2014 highlighted how SME's were unprepared for disasters, and that they faced greater challenges for recovery than larger businesses. Through representative employer and business membership organisations, the commercial sector can play vital roles in preparing for and recovery from disaster.

The Employers' Confederation of the Philippines (ECOP) – the national employers' organisation dealing with labour relations and socio-economic development – together with the International Labour Organization's Bureau for Employers' Activities (ACT/EMP), is working to equip SME's with basic knowledge and practical tools, to rebound from disasters, resume normal operations, and to be able to provide more jobs to people in disaster-affected areas.

Their strategies include:

- The development of a central SME disaster desk/resource centre/online portal to easily navigate to the information they need regarding available support (credit, alternative markets, technical support) and necessary documentation
- Business Continuity Planning (BCP) training
- Technical assistance delivery through a 'Big Brother Small Brother' approach, coaching and transferring skills from large and advanced enterprises to smaller businesses

Needs assessment for the private sector in the Philippines. Disaster preparedness, response and recovery. (2015) ILO

www.ilo.org/asia/publications/WCMS_368162/lang–en/index.htm

## Case Study
## Training blockmakers to improve blocks to improve building safety

Concrete block standards, quality, and costs are a challenge for reconstruction in almost all areas of the world. There are variations in size, shape, materials, mix, compaction, and curing which affect the resultant strength and durability of blocks.

Reconstruction generates a massive increase in demand for building materials, with some imported or transported, but concrete blocks are usually locally fabricated. New small and medium sized block businesses are commonly established to meet the demand, many without knowledge or experience of block making or the required standards. Likewise, the majority of customers only pay regard to the price, and are unaware of the high risks involved in building with severely substandard blocks.

*Low-quality blocks for reconstruction. Haiti.*
**Source:** *UN-Habitat.*

Improving the quality of concrete blocks can significantly increase the safety of new construction, and can potentially deliver sustained improvements to future buildings.

SDC, Build Change, UN-Habitat, and ILO have all undertaken block maker training for reconstruction of disasters in a number of countries and cite the importance of: 1) scientific analysis of deficiencies in block quality to be targeted in technical training, and 2) business development support to ensure block makers can produce to the required quality at a viable cost.

# 5.3 Construction professionals

## Profile

- Structural engineers
- Civil engineers
- Architects
- Quantity surveyors
- Sub engineer/site supervisors/clerk of works

## Training objective

- Increase design, specification and construction quality and compliance with standards.
- Mobilise and equip construction professionals to promote recovery objectives including risk reduction and sustainable housing.
- Improve engineering and construction expertise and education for the longer term.

## Output

- Participants with improved knowledge of engineering theory, building standards and regulations including hazard resistance and environmental sustainability.
- Participants with improved knowledge of construction quality assurance.
- Participants with improved practical skills to demonstrate construction details.
- Participants with improved knowledge and skills in building assessment, research and development, documentation.
- Participants with improved knowledge and skills in communication and community engagement.
- Participants with improved knowledge and skill in training, learning and technology transfer.

## Training type

- Modular training (from 1/2 day – 2 weeks per module).
- Range of modules depends role, designation and on context.
- Participation in demonstration/model house building and associated events.
- On-job training for recovery programme staff.
- Introductory modules may be provided to current students.

## Duration and timing

- Training module duration may range from ½ to 1-day information sessions to 1-2 weeks including practical construction exercises. The number of core and optional modules depends on the recovery context.
- Participation in training associated with demonstration building will be determined by the construction schedule.
- Training on policies and core standards for recovery programme staff should take place as early as possible to ensure correct and consistent dissemination.
- Training for new graduates and new recruits should take place before field deployment but will require refresher training to respond to field issues and additional inputs over the duration of recovery for policy and standard revisions and additional guidance topics on sustainable housing.
- Training for existing staff (government, NGO) involved in recovery programmes will need to be balanced with work commitments.
- Non-construction seasons (e.g. winter, monsoon) may be convenient for training participants when fieldwork may be limited.
- Training for existing construction professionals not involved in recovery programmes may be provided during non-working times, or may be provided as consolidated courses.

## Training scope

- The range of training modules and activities depends on the context: construction professional education and experience levels, construction sector needs, institutional arrangements, and the roles of construction professionals in recovery programmes (e.g. development of standards, site supervision, training of masons).

## Training scope

**Policy:**

- Reconstruction policies, programmes, terms and conditions
- Disaster risk management, risk assessment and mitigation.

**Technical:**

- Hazard resistant building design and detailing and construction quality assurance in all locally appropriate:
  - Traditional technologies (e.g. timber frame, brick)
  - Conventional technologies (e.g. concrete block, reinforced concrete)
- Depending on the context:
  - Building vulnerability and damage assessment
  - Building repair and retrofitting techniques
  - Conservation of heritage buildings
  - Energy efficiency and environmental performance
  - Sustainable household water management and sanitation
  - Site works, plinths, aprons, retaining walls, drainage
  - Information management (CAD, GIS)

**Construction management:**

- Site surveying
- Building estimation, quantity surveying,
- Accountancy, financial management and financial planning
- Site and plant management, personnel management, health and safety

**Recovery programme:**

- Needs assessment and project development
- Documentation and reporting
- Monitoring and evaluation
- Technical, social, economic, environmental impact assessments
- Information management (MS office)

**Promotion:**

- Communication
- Negotiation and conflict resolution
- Adult learning and technology transfer
- Planning formal and informal learning activities
- Preparation of information materials

## Training providers

- Third-level education providers
- Professional institutes
- Government authorities
- Vocational training providers
- Post-disaster reconstruction agencies
- Highly skilled construction workers/artisans are required for practical skills training.

## Factors

### Eligibility and targeting:

Third-level qualification in engineering, architecture or related discipline

Defined duration and type of professional site experience may be considered as equivalent to third-level qualification.

Current students in engineering, architecture or related discipline.

Staff already involved in or recruited for recovery programmes are priority participants.

Local construction professionals in public/private employment are priority participants.

Retired construction professionals should participate to become trainers or promoters formally or informally in their communities.

Migrant professionals may attend training at origin or in reconstruction locations.

Training providers may operate screening examinations, interviews or other measures to ensure participants are qualified and to identify training needs.

Training and certification may be mandatory.

### Curricula:

Existing curricula may be revised to incorporate new standards, including hazard resistance measures.

All training requires both theory and practical learning, through exercises or actual construction.

Training should take account of local languages including local construction terminology.

Core curricula can be localised through incorporating local examples, including building damage, local good practices and on-site discussions.

Curricula will evolve as standards and guidance are determined, including additional technologies, solutions to field problems, updates to reconstruction policies.

Training on topics such as rainwater harvesting or energy efficiency may be developed and provided at later stages in recovery.

Training should be demand-led, according to local context, local community and local construction worker needs.

Consider institutionalisation and transfer of curricula for longer term disaster risk management capacity building, future recovery programmes and construction professionals' continued development.

### Facilities and resources:

Training may operate in a range of existing facilities, rented, temporary or makeshift premises according to the type of training, short information sessions have different requirements to classroom learning or practical exercises.

Existing vocational training centres or other education facilities, government premises, community halls, or other publicly accessible spaces may be utilised.

Premises require: classroom space, secure storage for tools, equipment and materials, (outdoor) space for practical construction exercises, water supply/storage, electricity supply/generators.

Training may be a key activity in reconstruction resource centres established as focal points for information and support, with display information, demonstration buildings or models, and advisory or support services. See Reconstruction centres.

Training on demonstration or model buildings may take place on sites managed by organisations or on private property.

Participants may be provided with sample timber joints, steel models or other materials on completion of training.

Printed course materials for trainers and for participants.

Demonstration construction and display materials.

### Funding:

Support required for construction professionals depends on existing capacity, on reconstruction needs, with implications for funding.

Budgets for training for existing or new staff may be included in recovery programmes, or support for participation by target participants may include stipends, transport or accommodation.

Construction materials are necessary for practical learning.

Training may be funded by sector stakeholders, including the provision of premises, logistics, personnel (by professional institutes, construction industry)

Training may be funded by participant fees.

Outside of recovery programmes, training may be provided under continued professional development mechanisms, by third-level institutions, by government or other channels.

## Case Study
### 3000 new engineers employed to support housing recovery by the government in Nepal

In 2016, Following the 2015 Nepal earthquake, the government recruited 2500 young engineers and sub engineers to deploy to the 14 priority earthquake-affected districts, followed by an additional 450 engineers to 18 moderately-affected districts in 2017. Their role was to support local authorities and communities, and to ensure stage inspection of reconstructed buildings for compliance with standards. They represent a significant investment in technical capacity to support housing recovery.

Some of the new personnel were trained and involved in damage assessment after the earthquake. The majority were recent graduates, who might otherwise have expected to emigrate for work. Before deployment, training was provided by the Department of Urban Development and Building Construction supported by NSET Nepal.

Individually and collectively, the engineers gained valuable knowledge, but they also faced challenges. Retaining personnel in remote areas proved difficult, with a drop-out rate of up to 50 percent. Thinly spread over a vast area, they have limited opportunities to regroup or share experiences. The emphasis on field-level capacity required greater associated investment at district and national institutional levels, and systems to support the continued professional development of the engineers.

Mobilising this large corps of engineers demonstrated unprecedented commitment by the government to the communities affected by the disaster, and to their reconstruction activities, and was necessarily task-focused. Ensuring continuous capacity building of individual professionals, and the strengthening and sustainability of institutions will require additional measures.

*Training on site for new government engineers.*
**Source:** *NSET Nepal.*

*Training for government engineers for housing recovery.*
**Source:** *NSET Nepal.*

## Case Study
### Exchanging skills in joint technical assistance teams

In the photograph, the person on the left is an engineer, and the person on the right is a master mason. Training for engineers included practical implementation of the housing construction standards they were promoting and inspecting. Engineers, with university or theoretical education, learned practical skills and confidence on site, and developed respectful relationships with mason colleagues through training. Masons learned theoretical rationales, calculation, and documentation skills from their engineer colleagues.

Likewise, engineers and architects employed in technical assistance programmes shadowed and were mentored by colleagues with training and experience in social mobilisation and communication. The exchange of skills and knowledge increased the total capacity and built stronger mutual understanding.

*Engineer and mason in joint practical training.*
**Source:** *UN-Habitat.*

# Guidance for training activities

## 5.4 Recovery programme personnel

### Profile

- Government personnel involved in recovery programmes
- Non-government personnel involved in recovery programmes
- Involved in the following roles:
  - Coordination, management, reporting
  - Social development, community engagement, outreach
  - Media and communication
  - Information management
  - Monitoring and evaluation
  - Human resource management
  - Financial management
  - Logistics

### Training objective

- Increase number of personnel to plan, manage and implement housing reconstruction support programmes.
- Increase knowledge and skills of existing government and non-government personnel (QA).
- Support use of common approaches, tools and systems.
- Increase long-term capacity in disaster management, housing and settlement support.

### Output

- Participants with improved knowledge of existing and post-disaster policy and regulatory environment, (legislation, institutional arrangements, programmes).
- Participants with improved knowledge and skills in information management including digital technologies.
- Participants with improved knowledge and skills in human resource management.
- Participants with improved knowledge and skills in financial management.
- Participants with improved knowledge and skills in community engagement and public communication.

### Training type

- Orientation sessions on core information (post-disaster policies and regulations, institutional arrangements).
- Range of role-specific training modules depends sector, designation and on context.
- Refresher training for updates and troubleshooting.
- On-job training/mentoring/advice.
- Participation in community-based events.
- Participation in workshops, conferences.
- Training may be available for personnel who are not employed in current recovery programmes, by government, humanitarian, third-level education or other providers (e.g. IASC cluster coordination training, emergency logistics) including online courses.

### Duration and timing

- Training on policies and core modules for recovery programme staff should take place as early as possible to ensure correct and consistent application.
- Timing and duration of role-specific training will vary.
- Training for newly recruited staff should ideally take place before field deployment.
- Training for existing staff (government, NGO) involved in recovery programmes will need to be balanced with work commitments.
- Specific seasons may be convenient for training community-liaison participants when fieldwork is limited (e.g. due to access).
- Training for personnel outside of current recovery programmes duration and scheduling according to providers.

## Training scope

**Core modules:**

Policy and regulatory:

- Policy and regulatory systems relating to disaster risk management.
- Existing and new policies relating to housing and settlement recovery.
- Housing and settlement recovery policies and programmes (e.g. financial assistance for reconstruction).
- Social and environmental safeguards.

Institutional and administrative:

- Existing and new institutional arrangements relating to housing and settlement recovery (e.g. authorisation and validation procedures, redressal systems).
- Stakeholder roles and coordination in housing recovery.
- Accountability, monitoring and evaluation in recovery.
- Common tools and formats for assessment, implementation and reporting.

Common training for personnel in all roles:

- Basic or advanced digital literacy and information management training.
- Training on the specific formats, systems and requirements related to their job and agency.
- Communicating with disaster-affected communities.

**Role specific training:**

Coordination and project management:

- Coordination skills. Coordination systems, tools and formats in recovery.
- Project development, proposal writing, monitoring and evaluation.
- Organisational management.
- Human resource management.
- Financial resource management.
- Information management.

Social mobilisation/community engagement/communications:

- Social, cultural and economic context analysis.
- Community engagement, representation, group dynamics.
- Negotiation and conflict resolution skills.
- Vulnerability and inclusion.
- Gender.
- Teaching and learning, adult learning, capacity building.
- Qualitative and quantitative monitoring and evaluation methodologies.

Information management:

- Data collection, processing, analysis and reporting according to the systems, tools and formats required.
- Information system hardware, installation, operation and maintenance.

## 5.4 Recovery programme personnel

| | |
|---|---|
| **Training scope** | Financial management:<br>• Financial resource management according to systems, tools and formats required.<br>• Information management.<br>• Fiduciary accountability.<br><br>Communication:<br>• Communication channel analysis.<br>• Community engagement.<br>• Negotiation and conflict resolution skills.<br>• Presentation skills.<br>• Media engagement, use of mass communication media and social media. |
| **Training providers** | • Senior personnel in government departments or non-governmental agencies may provide role specific training.<br>• Outside experts may provide sector specific training (e.g. information management). |



### Factors

#### Eligibility and targeting:

All personnel involved in recovery should have mechanisms to access information according to their roles and responsibility (e.g. print, web site, intranet, regular emails, briefings).

Large numbers of staff are involved. Planning for core and role specific training, for senior and junior staff, for initial and refresher training and for on-job support requires prioritisation, sequencing and cascade processes.

Training may be initially provided to key personnel per department/agency who in turn ensure training is provided to colleagues/staff.

Personnel from local organisations (government and non-government) may be prioritised where their access to training opportunities are limited.

#### Curricula:

Curricula content may be formalised in operational manuals by government departments or assistance agencies or as part of recovery programme development.

Training on government and agency procedures and systems may exist and may be revised or accelerated for post-disaster programmes.

Training on communication, information management or other topics may be developed and provided by sector experts (e.g. professional institutes, third-level educators, development partners).

Training may be developed and provided through collaboration between stakeholders, pooling expertise and ensuring user needs are incorporated (e.g. representatives of government departments, NGO implementing agencies)

Curricula will evolve as institutional arrangements, policies, regulations and programmes are developed and as needs and opportunities are identified.

Continuous learning, on-job support and mentoring require planning with learning objectives, targets and indicators.

Consider institutionalisation and transfer of curricula for longer term disaster risk management capacity building.

#### Facilities and resources:

Training may take place on-site (in government/agency offices) or off-site (in educational facilities, or hired spaces), depending on the numbers. participating, training providers, duration.

Training may require computer and internet access for participants.

Print materials including operational manuals may be provided to participants.

Personnel involved community mobilisation or coordination may participate in community-based activities as part of their training, and may require logistical support.

Training may provide resource materials online, or may use webinar or other mechanisms for virtual participation, to facilitate remote access and discussion.

#### Funding:

Budgets are required for transport, accommodation and logistics for officials participating in training outside of their duty stations and participating in field visits.

Non-governmental organisation personnel.

Training for non-governmental organisation personnel may be funded under recovery programmes. Local organisations may require funding.

Training may be funded as an input for local capacity building, for government, civil society or partner organisations.

## Case Study
### Haiti: government engineers in communications training

After the 2010 earthquake In Haiti, engineers employed by the Ministry of Transport, Communications and Public Works (Ministere des Travaux Publics, Transports et des Télécommunications) took part in communications training, including classroom and practical exercises. Senior personnel were trained to participate in interviews with radio and print journalists. Resource personnel took part in the development of information and communication materials.

All personnel were trained to communicate with contractors, masons, community leaders, and households, and to organise outreach activities. Training included on-job practice sessions, including at demonstration events and at model house site events. Very skilled and effective personnel were identified as leaders for their colleagues to watch and learn from in action, and to provide role models and mentors from within the staff on a continuing basis. The engineer pictured above on the right, Balthazar, was one such leader, who mentored over 50 of his colleagues.

*Government of Haiti engineers practising communications skills in the community.* **Source:** *Internews.*

# Guidance for training activities

## 5.5 Local partner organisations

### Profile

- Civil society organisations
- Community-based organisations
- Philanthropic organisations
- Religious groups
- Professional institutes and trade organisations
- Education and training providers
- Training participants may be decision makers, managers or directly involved in recovery activities.

### Training objective

- Increase participation of local organisations in recovery.
- Increase local capacity to plan and implement technical assistance activities.
- Increase capacity of local organisations to access and manage funding.
- Support use of common approaches, tools and systems .
- Increase long-term capacity in disaster management, housing and settlement support.

### Output

- Participants with improved knowledge of existing and post-disaster policy and regulatory environment (legislation, institutional arrangements, programmes)
- Participants with improved knowledge and skills in technical assistance planning and implementation.
- Participants with improved knowledge and skills in financial management.
- Participants with improved knowledge and skills in human resource management.
- Participants with improved knowledge and skills in information management.

### Training type

- Orientation and discussion sessions on core information (post-disaster policies and regulations, institutional arrangements).
- Orientation and discussion sessions on programme and activity development.
- Modular training on organisational development.
- On-job training/mentoring/advice.
- Training may be available outside of current recovery contexts in areas of high hazard or frequently recurring disasters.

### Duration and timing

- Orientation and discussion sessions range from 1 hour to 1 day according to the scope and participant availability.
- Orientation and discussion sessions should take place as early as possible to ensure local organisations optimise participation in recovery. Since personnel may be disaster-affected or involved in humanitarian response, recovery sessions should be repeated.
- Refresher sessions are needed for updates and troubleshooting.
- Organisational development training may involve short orientation for decision makers and longer skills training for respective personnel.
- Organisational skills training timing and duration depends on participant capacity, needs and availability.
- Timing may be opportunistic (e.g. coinciding with funding calls for proposals).
- Training for organisations need to be balanced with existing commitments and scheduled outside working hours.
- Training for organisations outside of current recovery programmes duration and scheduling according to providers.

## Training scope

### Orientation and discussion sessions:

- Orientation and discussion sessions for recovery programme personnel modified for participants unfamiliar with government humanitarian and development partner systems:

### Skills training:

Technical and programmatic:

- Technical assistance activities and potential engagement
- Project development, capacity and needs assessment, proposal writing
- Accountability, monitoring, evaluation, reporting

Organisational:

- Financial resource management.
- Information management.
- Human resource management.
- Personnel may participate in skills training for recovery programme personnel, e.g. information management, social mobilisation, communication.
- Formal training to be followed up with advice, mentoring and other support to enable local organisations to respond to recovery opportunities successfully.

## Training providers

- Senior personnel in government departments or non-governmental agencies.
- Funding agency personnel may provide guidance on administrative procedures.
- Outside experts may provide sector specific training (e.g. information management).

## Factors

### Eligibility and targeting:

A broad range of existing and new local organisations may participate in orientation sessions. Sessions may be open and mixed, or streamed into stakeholder groupings.

Skills training and subsequent organisational advice may be provided by donor agencies to implementing partners.

All organisations should have mechanisms to access information to facilitate their roles in recovery (e.g. print, website, email subscription).

### Curricula:

Curricula content may be formalised in operational manuals by government departments or assistance agencies or as part of recovery programme development.

Organisational skills training on financial, human resource or information management or other topics may be developed and provided by sector experts (e.g. professional institutes, third-level educators, development partners).

Curricula will evolve as institutional arrangements, policies, regulations and programmes are developed and as needs and opportunities are identified.

Continuous learning, on-job support and mentoring require planning with learning objectives, targets and indicators.

Consider institutionalisation and transfer of curricula for longer term disaster risk management capacity building.

### Facilities and resources:

Training requires learning spaces, and may take place in government of NGO premises, in educational facilities, or hired spaces, depending on the numbers participating, training providers, duration.

Printed materials for trainers and participants.

Participation in field-based activities may use local government premises, reconstruction centres, NGO or community facilities.

Field visits in disaster-affected areas facilitate exposure, experience and discussion. They require transport and logistical support.

Training may provide resource materials online, or may use webinar or other mechanisms for virtual participation, to facilitate remote access and discussion.

### Funding:

Development partners may fund capacity building of local partner organisations and local stakeholders.

Capacity building of local partners may be a condition of funding for international organisations.

## Case Study
### The Global Network of Civil Society Organisations for Disaster Reduction, GNDR

Since its foundation in 2007, GNDR has grown to over 800 members. GNDR has undertaken a range of collaborative actions designed to influence policies and practices at international, national and local levels including policy monitoring (Views from the Frontline), policy advocacy (Reality Check), action-learning programmes (Action at the Frontline; Frontline, CBDRM), and awareness raising campaigns (365 Disasters). Action at the Frontline (AFL) is a programme designed to strengthen local capacities for learning and action in the face of everyday disasters, building community resilience.

AFL engages at three levels: 1) within individual communities partnered with civil society organisations (CSOs) and other local stakeholders; 2) between local communities; and 3) in local, national and global governance. It has three objectives related to these levels:

1. To enable CSOs and local communities to work together on strengthening local capacity and leadership to build resilience
2. To enable CSOs and local communities to learn and share with each other on actions, strategies and innovations to strengthen local capacity to build resilience
3. To enable CSOs and local communities to share knowledge and create political space to inform and influence local, national and global governance to build resilience

www.gndr.org/about.html
www.gndr.org/programmes/action-at-the-frontline.html

## Case Study
### The Asian Disaster Reduction and Response Network, ADRRN

The Asian Disaster Reduction and Response Network (ADRRN) emerged from recognition of the wealth of expertise and experience among Asian civil society organisations (CSOs), the potential for those organisations to work more closely together, to share information to learn from each other, and to increase the capacity of a wider circle of CSOs.

Since 2002, ADRRN has rapidly expanded from an awareness-focused network to a regional voice in advocacy and capacity building issues. Its main aims have been to promote coordination, information sharing, and collaboration among CSOs and other stakeholders for effective and efficient disaster reduction and response in the Asia-Pacific region.

www.adrrn.net

# 5.6 Government officials, policy and decision makers

## Profile

- Government
- Cabinet officials
- Government press office
- Reconstruction authority personnel
- Disaster management authority personnel
- Line department personnel involved in recovery (e.g. finance, housing, planning, statistics, social welfare, culture)
- Local authority personnel in disaster-affected areas
- Military and civil defence representatives involved in disaster risk management
- Elected representatives from disaster-affected areas/ communities

## Training objective

- Facilitate discussion on and increase knowledge of housing reconstruction thinking and practice.
- Facilitate discussion on and increase knowledge of government and other stakeholder roles in recovery and housing reconstruction.
- Inform and improve decision making by officials related to recovery.
- Mobilise officials to promote recovery objectives including risk reduction and sustainable housing.



## Output

- Participants with improved knowledge of existing and post-disaster policy and regulatory environment, (legislation, institutional arrangements, programmes).
- Participants with improved knowledge of previous disasters and recovery experiences, locally, nationally and internationally.
- Participants with improved knowledge of current disaster impact, response to date, and proposed recovery measures and sustainable risk reduction prospects.
- Participants with improved knowledge and skills in community engagement and media.

## Training type

- Orientation sessions to provide information (from 1 hour to 1 day).
- Discussion sessions for facilitate exchange, debate and to collect and respond to questions (from 1 hour to 1 day).
- On-job training/mentoring/advice for key personnel.
- Field visits to observe or participate in programme activities.
- Field visits to other disaster locations.
- Participation in conferences, learning or exchange events.

## Duration and timing

- Orientation and discussion sessions range from 1 hour to 1 day according to the scope and participant availability.
- Sessions may be scheduled as regular updates (weekly, monthly, quarterly at different stages).
- If participants travel considerable distance to a central location, a series of sessions may be organised to optimise their availability.
- Written materials may need to be provided in advance to allow participants time to prepare feedback for discussion, or materials may be provided after information sessions for written feedback afterwards.
- All participation needs to balance with other work commitments and may require evening or weekend sessions, or off-site events to ensure dedicated time.
- Sessions to facilitate initial consultation should be organised as early as possible to capture and process informed input.
- Sessions to promote policies and programmes should be organised as possible to ensure accurate and consistent dissemination.

## 5.6 Government officials, policy and decision makers

### Duration and timing

- Timing may be contingent on confirmation of institutional arrangements and identification of key decision makers, or information may be provided early to a broader range of participants.
- The order of sharing and discussing information may need to consider factors (e.g. national to local, senior to junior, political to administrative staff).
- Orientation and discussion sessions will need to continue over the course of recovery, as policies and programmes evolve. Sessions may also adapt (e.g. to focus on review of progress, institutionalisation of learning).
- Field visits to disaster-affected/recovery areas and to programme activities should be continuous and prioritised.
- Participation in visits to other disaster areas/countries, conferences or learning may be scheduled or opportunistic.

### Training scope

**Policy and regulatory:**

- Policy and regulatory systems relating to housing and land use.
- Policy and regulatory systems relating to disaster risk management.
- Existing and new policies relating to housing and settlement recovery.
- Existing and new standards and guidelines specific to housing and settlement recovery (e.g. repair of damaged buildings, resettlement of displaced households).
- Housing and settlement recovery policies and programmes (e.g. financial assistance for reconstruction).
- Social and environmental safeguards including codes of ethics to address needs of disaster-affected populations

**Institutional and administrative:**

- Existing and new institutional arrangements relating to housing and settlement recovery (e.g. building inspection related to financial assistance, redressal systems).
- Financial resource management in recovery including fiduciary safeguards and anti-corruption measures
- Human resource management in recovery.
- Information management in recovery.
- Information management skills, data collection, analysis and reporting.
- Monitoring and evaluation in recovery.
- Coordination of non-governmental stakeholders in housing recovery.
- Data management, monitoring and reporting, and use of monitoring systems such as Management Information Systems and Geographic Information Systems

**Disaster risk management:**

- Disaster risk management theory and practices. Assessment of risks, vulnerability, capacity, post-disaster needs and damages, and wider socio-economic impacts of disaster recovery
- Previous national and international disaster and recovery experience.
- Post-disaster tools (e.g. PDNA, PDRF).
- Emergency response and recovery programming, situation analysis.
- Stakeholders in recovery (government, donors, UN, NGOs, CBOs, private sector).
- Assessment of risks, vulnerability, capacity, post-disaster needs and damages, and wider socio-economic impacts of disaster recovery

## 5.6 Government officials, policy and decision makers

### Training scope

**Communication:**

- Community engagement, representation.
- Negotiation and conflict resolution skills.
- Managing meetings.
- Presentation skills.
- Media engagement, use of mass communication media and social media.
- Code of ethics and guiding principles for recovery to address needs of disaster-affected people with empathy and professionalism
- Anti-corruption and monitoring measures to prevent financial, physical and social exploitation of disaster-affected people
- Community-based participatory planning and budgeting mechanisms, including enforcement of anti-corruption measures in all sectors
- Data management, monitoring and reporting, use of equipment such as phones, and use of monitoring systems such as Management Information Systems and Geographic Information Systems
- Cross-sectoral project planning, management and monitoring that integrates climate adaptation, disaster risk management and social risk management frameworks by engaging multiple actors

### Training providers

- Government authorities
- Professional institutes
- Third-level education providers
- Development assistance stakeholders
- External peers (government officials from other countries etc.)

### Factors

**Eligibility and targeting:**

All officials involved in recovery should have mechanisms to access information (e.g. print, web site, intranet, regular emails, briefings).

All officials directly involved in recovery decision making or implementation should have access to interactive mechanisms (e.g. information and discussion sessions where they may seek clarifications or contribute input).

Government authorities have large numbers of personnel. Planning for participation in information and discussion sessions, field visits and specific learning requires prioritisation, sequencing and cascade processes.

While key and senior officials may have access to extensive documentation, they may have limited time for reading, dedicated sessions provide opportunities for summary presentations of content and for discussions.

Incremental recruitment or turnover of personnel may require repeat of information sessions.

Institutionalisation and transfer of learning from recovery experience may involve training of other government personnel (civil defence, disaster management authorities, non-affected district officials etc.).

**Curricula:**

Orientation on government policies, regulations and systems may exist for civil service training and may be revised or accelerated for post-disaster refresher sessions for existing staff or induction for new staff.

Global institutional training (e.g. on post-disaster needs assessment, post-disaster recovery frameworks and other methodologies) may have already been provided pre-disaster to key officials, or may need to be provided or updated for current officials.

Development of training on relevant previous disaster and recovery cases and issues may be supported by national and international disaster risk management institutions and specialists.

Training on communication, information management or other topics may be developed and provided by local experts.

Curricula should use local languages and terminology, and promote familiarisation with sectoral and technical jargon (as well as ideas).

Curricula will evolve as institutional arrangements, policies, regulations and programmes are developed.

Training will evolve as needs and opportunities are identified.

Participation in field events, conferences and continuous

learning, on-job support and mentoring require planning with learning objectives, targets and indicators.

Consider institutionalisation and transfer of curricula for longer term disaster risk management capacity building.

### Facilities and resources:

Training may take place on-site (in government offices) or off-site (in educational facilities, or hired spaces), depending on the numbers participating, training providers, duration.

Printed materials for trainers and participants.

Display materials at government premises may inform staff or public audiences.

Participation in field-based activities may use local government premises, reconstruction centres, NGO or community facilities.

Field visits in disaster-affected areas facilitate exposure, experience and discussion. They require transport and logistical support.

Training may provide resource materials online, or may use webinar or other mechanisms for virtual participation, to facilitate remote access and discussion.

### Funding:

Budgets are required for transport, accommodation and logistics for officials participating in training outside of their duty stations and participating in field visits.

Participation in conferences or overseas field visits may be supported by event organisers or development partners.

## Case Study

Training for government officials, including visits to buildings under construction post-disaster, to discuss issues affecting compliance with standards; technical, regulatory, social and economic factors involved; and implications for authorities.

*Government of AJK officials in training on building compliance.* ***Source:*** *UN-Habitat.*

# 5.7 Media

## Profile

- Journalists from traditional and digital media including: tv, radio, newspapers, websites, bloggers, commentators.
- Media owners and producers including: publishers, mobile phone companies.

## Training objective

- Increase number of personnel with knowledge of recovery at international, national and local levels in various media.
- Improve media coverage of recovery, mitigate risks of confusion and miscommunication through media.
- Increase media engagement in technical assistance.
- Increase long-term media capacity to report on disaster management, construction, housing and settlement issues.
- Promote institutionalisation, capture and sharing of recovery data including photo libraries, interviews.



## Output

- Participants with improved knowledge of existing and post-disaster policy and regulatory environment, (legislation, institutional arrangements, programmes).
- Participants with improved knowledge of previous disasters and recovery experiences, locally, nationally and internationally.
- Participants with improved knowledge of current disaster impact, response, recovery and risk reduction prospects.
- Participants with increased familiarity with recovery actors and data sources.
- Participants with increased skills in research techniques and content production.

## Training type

- Orientation sessions to provide information (from 1 hour to 1 day).
- Discussion sessions for facilitate exchange, debate and to collect and respond to questions. (from 1 hour to 1 day).
- Field visits to observe or participate in programme activities.
- Field visits to other disaster locations.
- Skills training including formal courses and/or on job advice.

## Duration and timing

- Orientation sessions on background and general topics on as early as possible to inform media coverage of recovery.
- Skills training as early as possible to increase media capacity to engage in recovery as a technical assistance stakeholder.
- Updates and discussion sessions may be scheduled regularly (weekly, monthly, quarterly at different stages in recovery).
- Field visits to disaster-affected/recovery areas and to programme activities may be scheduled regularly or may be opportunistic, but should be continuous over the duration of recovery.

## Training scope

**Orientation and discussion sessions:**

Disaster risk management:

- Disaster risk management thinking and practices, (e.g. Sendai framework).
- Previous national and international disaster and recovery experience.
- Emergency response and recovery programming, situation analysis.
- Stakeholders in recovery (government, donors, UN, NGOs, CBOs, private sector).

## Training scope

Policy and regulatory:

- Policy and regulatory systems relating to disaster risk management.
- Existing and new policies relating to housing and settlement recovery
- Housing and settlement recovery policies and programmes (e.g. financial assistance for reconstruction).
- Accountability, safeguards, monitoring and evaluation.

Institutional and administrative:

- Existing and new institutional arrangements relating to housing and settlement recovery (e.g. authorisation and validation procedures, redressal systems).
- Stakeholder roles and coordination in housing recovery.
- Data sources in housing recovery.

**Media skills:**

Content and production:

- Background and context
- Media ethics, vulnerability, inclusion, human rights in crises
- Selection and use of sources and data
- Writing and editing
- Photography and video
- Audio and radio
- Digital content, design and management
- Social media
- Communication channel analysis
- Feedback and impact analysis
- Media roles in technical assistance
- Media coverage of recovery

## Training providers

- Government authorities
- Press association, national or international
- Third-level education providers
- Development assistance stakeholders (UNESCO, BBC media action, CDAC Communicating with disaster-affected communities)

## Factors

### Eligibility and targeting:

Media actors from a range of backgrounds (politics, business, social) and using a range of platforms (traditional, digital) are eligible to participate, encouraging a mix to reflect a range of views, issues and to optimise coverage.

Prioritise local media actors operating in the affected areas.

Formalise media engagement mechanisms (e.g. through unions of journalists) and consider mechanisms for engagement with new media actors (e.g. social media commentators).

Clarify training and capacity development initiatives related to media mass communication activities in technical assistance programming.

### Curricula:

Development of training on relevant previous disaster and recovery cases and issues may be supported by national and international disaster risk management institutions and specialists.

Orientations on policies, regulations, programmes, stakeholders and progress updates may be provided by key government and non-government personnel who can address questions in discussion sessions.

Media skills training may be carried out by local experts including third-level education or institutional providers, through formal courses or through mentoring, feedback or on-job support.

Consider institutionalisation and transfer of curricula for longer term disaster risk management capacity building.

### Facilities and resources:

Training may take place on-site (in government offices) or off-site (in educational facilities, or hired spaces), depending on the numbers participating, training providers, duration.

Field visits in disaster-affected areas facilitate exposure, experience and discussion. They require transport and logistical support.

Training may provide resource materials online, or may use webinar or other mechanisms for virtual participation, to facilitate remote access and discussion.

### Funding:

Media training and capacity building may be supported under governance, transparency and accountability initiatives.

Media skills development may be supported under mass communication programme initiatives as part of wider recovery programme planning.

Facilitating media exposure through field visits to disaster-affected areas may require logistical support.

## Case Study
## Media training resources

- www.unesco.org/new/en/communication-and-information/resources/publications-and-communication-materials/publications/full-list/media-as-partners-in-education-for-sustainable-development-a-training-and-resource-kit
- www.cdacnetwork.org/tools-and-resources/media-landscape-guides
- www.cdacnetwork.org/search/?q=&x=0&y=0&type=CdacResource&rtype=media-landscape-guide

## Case Study
## Information as Aid: training citizen journalists

Internews and Nethope are supporting reporting on recovery in Puerto Rico after Hurricane Maria in 2017 through their programme 'Information as Aid,' enabling access to and sharing of information for people in remote areas. Community correspondents from around the island were recruited and trained in basic newsgathering and community engagement techniques by the Information as Aid team, and then they began gathering information and producing reports. Their reports are first shared in a private social media group, where an editor reviews and offers suggestions. When ready, the posts are published to the public "Information as Aid - Puerto Rico" page. Through a partnership with WALO FM, each correspondent will also share their work monthly on WALO FM's station.

*Citizen journalists practising interview techniques during training post Hurricane Maria, Puerto Rico 2017.* **Source:** *Justin Auciello/ Internews.*

The citizen reporters cover two communities each, engaging residents in dialogue, sharing questions and information with NetHope's parallel information management initiative, and producing news and media. Knowing that photos and videos tell a more complete story, photojournalists are also involved. Working with the Centro de Periodismo Investigativo (Center for Investigative Journalism), the project will also conduct a data journalism training and manage a small team of reporters that will produce investigative journalism reports around recovery topics.

- www.internews.org/story/recovery-post-maria-puerto-rico
- www.nethope.org/2019/03/22/grant-expands-successful-information-as-aid-project-in-puerto-rico


International Federation
of Red Cross and Red Crescent Societies
বাংলাদেশ রেড ক্রিসেন্ট সোসাইটির চূড়ান্ত তালিকায়
আপনার নাম অন্তর্ভুক্ত থাকলে আপনার প্রদত্ত মোবাইল
নম্বরে পোস্ট অফিস কর্তৃক (BPO বা 2277 নম্বর
থেকে) এসএমএস এর মাধ্যমে একটি গোপন নম্বর
(TPIN) পৌঁছে যাবে। এসএমএস টি সংরক্ষণ করুন।
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*Source:* *IFRC.*

# CHAPTER 6
# Mass Communication/media

Mass communication refers to the process of transmitting messages to a large and often scattered population or audience. Mass communication media constitutes print, audio visual, phone and internet-based media production and dissemination of information. Mass communication may be one-way, from supplier to audience, or may involve two-way communication exchange such as platforms for debate, collection and response to questions.

## Why does it matter?

Recovery has been described as fuelled by two resources: finance (to acquire materials and labour) and information (Johnson and Olshansky 2017). The disaster-affected population, the wider local or national population, government, business and assistance agencies need timely, accurate information to enable them to make critical decisions. Mass communication provides opportunities to reach large numbers of people quickly, with reliable information which can be validated or controlled. Even with limited capacity, governments can use media to communicate directly, thereby showing leadership and solidarity with the disaster-affected population.

*Radio Nebula hosts a weekly call-in show where residents can connect with aid and government workers to get their questions answered in Sulawesi, Palu, Indonesia.* **Source:** *Ian Morse/The New Humanitarian.*

The scale of the communication challenge after disasters is vast, and increasing. Scale needs to be a determining factor in the planning and implementation of technical assistance. While there are excellent community-based initiatives, it is not time or cost effective to rely on in-person activities as the primary or only channel for communication of policies, standards and other information. Community and project-level activities are likely to be uneven in coverage and in quality. Mass media communication offers several advantages in comparison, including speed, accuracy and reach.


*Campaigns to raise awareness of the effects of El Nino on Timor Leste included information boards in public spaces.* **Source:** *Wendy Levy/IRIN.*

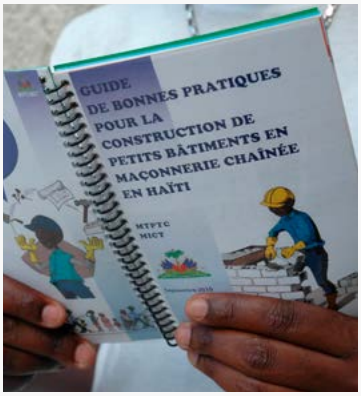
Mass media also present advantages for certain topics and types of communication, including policy announcements and debate, but present challenges for communicating complex visual information such as guidance for construction. Communication via mass media can reinforce and complement training and field outreach activities and vice versa in a balanced technical assistance strategy.

This century has seen unprecedented change in communications technology, with mobile phone and internet access, emerging platforms for exchange of data and democratisation of the production of media content. Communication is central to the objective of technical assistance. Those responsible for developing technical assistance policies and programmes need to explore the potential of mass communication media, the opportunities to be seized and the risks to be anticipated and mitigated such as data security concerns, and take appropriate steps to address regulatory, technical, economic and ethical issues.

The role of mass communication and media in recovery involves more than disseminating policy and guidance information. The ability, capacity and interest of media actors to play a proactive role in recovery can increase the level of public discourse, develop or diminish solidarity with affected populations, support or undermine the roles and performances of authorities and assistance actors, or advocate for risk reduction. A free and engaged press is key to ensure transparency and accountability. The role of the media may be promoted through training journalists, allocating resources for investigative fieldwork and through regular briefings by and interviews with decision makers as well as ensuring maximum information of public interest is publicly available.

Engineering personnel, organisations and authorities may be less familiar with media campaigns than health sector representatives for example. However, after a disaster, housing and construction are likely to be priority topics of interest for the population and therefore coverage by the media. Expert stakeholders including authorities, professional bodies, housing and construction advocates can use this window to directly reach households and contribute to public discourse. The window will close again and it will become difficult to get airtime to inform, guide or lobby for compliance with building regulations or other housing issues.

The chapter describes mass communication media activities according to the category of media channel: *video, audio (radio and internet), printed materials and social media.*




*Government building standards illustrated for housing reconstruction.*
**Source:** *SDC.*

# Strategy for mass communication

## Assess damage and losses, capacity and needs:

- Assess pre- and post-disaster communications infrastructure capacity, coverage and access (phone, internet, transportation, advertising)
- Assess pre- and post-disaster media infrastructure capacity, coverage and access (tv, radio, print)
- Assess requirements for restoration or expansion of communications and media infrastructure capacity
- Carry out communication channel assessment, profiling communication and media usage and attitudes, including sources accessed by various constituencies, and for various types of information, production and dissemination capacity
- Carry out information needs assessment

## Develop a sequenced plan based on actual resources:

### Based on the above assessments develop sequenced plans to:

- Mobilise communications stakeholders and resources
- Mobilise media stakeholders and resources
- Define institutional leadership and coordination mechanisms
- Define development and validation mechanisms for communication
- Define mass communication strategy for dissemination of recovery policies and procedures
- Define mass communication strategy for dissemination of technical assistance information, including risk, engineering, quality assurance, cost and financial management
- Restore communications infrastructure and media capacity; expand capacity including temporary capacity to support recovery
- Upskill existing and train new media personnel including on recovery-related issues; train recovery stakeholders on media and mass communications

## Establish systems for coordination, information management, monitoring and evaluation.

## Information management systems to support data on and analysis of:

- Public information products and services
- Communication providers, services and products
- Media providers, services and products
- Recovery information provided, dissemination and distribution
- Listenership, participation, customers, usage and other access to media
- Costs and funding of mass communication activities

### Monitoring and evaluation to support:

- Monitor communication and media capacity, coverage and gaps
- Monitor profiles of audience, customers and participants
- Monitor information needs of various constituencies
- Monitor information dissemination
- Correlate with other information management systems, for example of construction typologies to target appropriate information
- Evaluate communications and media usage
- Evaluate impact of media activities and products, including application of information in relation to compliance with building standards
- Evaluate cost-effectiveness of mass communication activities
- Evaluate institutionalisation of mass communication policies, procedures and activities in support of disaster risk management (preparedness, response, recovery, risk reduction)
- Evaluate lessons learned for mass communication in future disaster recovery

*Standardized posters for recovery distributed to all areas and households.* **Source:** *UN-Habitat.*

## Risks and challenges

In the absence of decisions and widespread communication of those decisions, for example on recovery policies and standards, the vacuum is likely to be filled with speculation, expectations, mistrust and misinformation, with negative impacts on relationships between government, affected communities and other stakeholders. Media capacity alone cannot redress the gap. Information cannot be communicated if authorization, policy and standard decisions are not made to develop and validate the required information.

Housing reconstruction and repairs commonly start earlier than other sector recovery as people start to solve their own housing situations, whether they have access to information or not on what and how to build. It is difficult and expensive to undo, retrofit or replace poor reconstruction started in the absence of guidance. Ideally, initial information should be available before people need to use it, so it can guide their choices and plans.

The development and approval of policies and standards and their translation into public information materials involves several processes, expertise and time. While demands for information are pressing, balance needs to be struck between due process including consultation, peer review and quality assurance, and issuing information prematurely.

In most post-disaster situations there is a plethora of messages and information materials, issued for all sectors and by many actors. Too much information risks flooding the media channels and overloading the target audiences beyond their absorption capacity. Communication strategies need to be coordinated within and across sectors to plan for more efficient and effective media campaigns.

Multiple stakeholders preparing and issuing information independently risks inconsistencies and confusion. Disseminating invalid or inappropriate guidance through mass media may have lasting implications as it is difficult to retract, retrieve or correct messages after they are released. Considering that all agencies are ultimately accountable to the affected populations, the risks associated with disseminating information via mass communication media should be carefully considered.

Construction guidance is particularly challenging to communicate. Engineering graphic norms are not familiar to many construction workers or to the wider public. Public information messages, campaigns or materials which are not appropriate or

accessible for the target audiences or users are not likely to be effective and may be detrimental if contributing to confusion or misinterpretation. Mass communication initiatives risk being supply driven and top down without adequate field testing, feedback or analysis of impact.

Media participation in recovery may politicise recovery planning and programmes, including fuelling unrealistic expectations of assistance or time frames. Media stakeholders may disengage from recovery after the initial humanitarian response. A strong media profile may reinforce the role of government in leading recovery. A weak media profile or competing coverage of other actors may undermine government leadership.

Public interest in recovery information including guidance tends to be highest directly after a disaster and at early stages in recovery, but may be expected to decline. Retaining attention requires more than repeating the same content. Advocacy and information campaigns need to evolve to sustain interest and engagement.

Mass communication can require significant resources, for large print runs, radio or tv air time or for commercial billboard space for example. The advantages of large-scale access to populations including speed and agility may be negated by slow production or validation processes, or financial limitations.

*Technical assistance architect shows children safer housing information, using his laptop to access web based materials.* **Source:** *UN-Habitat.*

## Factors to consider

### Media channels:

The pre- and post-disaster communications capacity, including presence and coverage of mobile phone, internet, radio and tv, print and other media, will affect the role of communications in post-disaster housing recovery and needs for sector support. Capacity may be depleted through disaster damage and loss of personnel. Capacity may be rehabilitated, improved or expanded to facilitate recovery. Mobile phone usage commonly increases after disaster, playing a critical role in facilitating transfer of information and resources.

Existing media are already familiar to affected populations and have extensive knowledge of their audiences or service users. However, media stakeholders may be unfamiliar with, or have limited interest in housing, construction, risk or other recovery topics. Press regulation, roles and capacities may determine their degree of freedom and effectiveness investigating and reporting recovery policies and progress.

The feasibility and appropriateness of various mass communication media use in recovery depend on physical and social characteristics, including the total area and population affected by disaster, remoteness or accessibility, rural or urban settlement patterns, livelihood and cultural practices, languages and literacy among other factors.

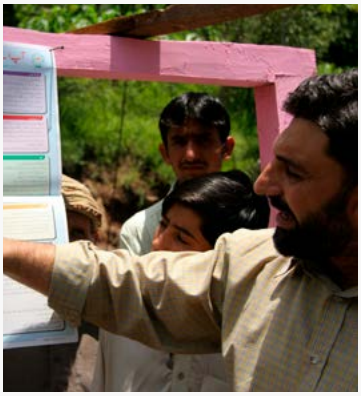
Local, national and international media may play different roles in recovery, including disseminating public information, reporting on progress and questioning policy decisions. The scale of the disaster and levels of damage are key variables, with different implications in the event of small recurring disasters managed locally compared to large catastrophic disasters involving significant national and international response.

Mass media campaigns and dissemination of messages or products generally requires mechanisms for validation and authorisation. Governments may have standing agreements with media operators regarding preferential rates for public

service information production and dissemination.

Multiple communication channels can reinforce, elaborate and repeat messages resulting in greater coverage and impact. Mass communication, training and field outreach strategies need to be planned together and in relation to continuous monitoring research and development, to optimise synergies in timing and content, and to respond to needs identified through respective activities. Demonstration construction can provide the step by step data that can be used to develop information products for training and field outreach.

Establish distribution and tracking mechanisms. Achieving coverage through communication and information activities requires well-coordinated planning, and systems to record and track data.



*Engineer explains poster fixed on site for reconstruction.* **Source:** *Vero Wijaya/ UN-Habitat.*

## Media content:

Mass media present advantages for certain topics and types of communication, including policy announcements and debate, but present challenges for communicating complex visual information such as guidance for construction. Communication via mass media can reinforce and complement training and field outreach activities and vice versa.

Mitigate the risk of an information vacuum and the risk of conflicting or confusing information by establishing mechanisms for decision making and for preparation and validation of public information. Control over information accuracy, consistency and quality should be prioritised throughout the duration. All partners should adhere to and contribute to a coordination process.

Prioritise the information needed by households, communities, authorities and recovery stakeholders to guide their decisions and actions at different stages after the disaster. Detailed information on reconstruction standards may not be as urgently required as announcements of damage assessments and requirements for households to be present. Mitigate the risk of early unsafe reconstruction by providing guidance as early as possible or alerting people that critical information will be forthcoming.

Where valid information exists pre-disaster, ensure it is issued quickly and appropriately to those who need it post-disaster. Whether or not policies and standards for recovery are confirmed, early communication campaigns can be used to introduce new institutional arrangements and to increase awareness of risk and the potential for improved housing. Creating a foundation of awareness can underpin demand driven change, participation in training and in community-based activities.

Different information and approaches should be prioritised for the various stages of recovery, from introduction and policies, to detailed construction advice, to grievance and complaint advice. This requires continuous effort and input and should be informed by feedback and by tracking impact. Ineffective communication channels or messages should be curtailed and efforts redirected to optimise resources. Capture and sustain interest by diversifying and updating communication strategies.

The preparation of communication materials for housing recovery requires technical understanding and detailed knowledge of local conditions and practices. Communication specialists with expertise in copy, graphics, production and marketing can contribute to content development but policy and engineering expertise are also required. A fast moving, dynamic and responsive programme requires continuous development of communication materials. Joint technical and communication teams with skills to develop, test, edit and adapt materials will be needed at many levels.

Housing recovery is driven by the preferences, decisions and actions of households. The diversity of households and communities requires diverse information needs, some of which can be anticipated in advance, and many which emerge progressively. Communication strategies that rely on top down development and dissemination will only be limited and may be ineffective. Ensure field issues, concerns and priorities are identified and reported for communication to be relevant and responsive. Collection of and answers to frequently asked questions, for example, illustrate a demand-led approach or two-way communication process. Feedback and analysis of recovery progress, constraints and concerns can also ensure field recovery reality rather than standards are driving communication.

*Information fair, distributing poster s and booklets on market day close to construction material vendors.* ***Source:*** *UN-Habitat.*

Develop simple and user-friendly information. Adopt the appropriate communication method according to the content and audience. Field-test draft messages and products. Use the simplest appropriate terminology avoiding bureaucratic and technical jargon. It is difficult to explain technical information by radio or text alone. Step by step photographs and videos are more accessible. Practical training, demonstration and model buildings may be the most effective means to explain construction details for accurate replication.

Mass media formal announcements of policies, revisions and updates and provision of authorised products communicating technical guidance can help ensure consistency and accuracy by government officials and in training and field outreach activities by a range of partners. Considering the dynamic and detailed nature of information, the large number and varying capacities of field personnel, reference materials play a vital role to mitigate the risk of human error. All official communication with formal status or important implications, such as time limits for financial assistance, should be widely disseminated through media that can be recorded, retrieved and referred to in the future, in the event of appeals.

Different information and approaches should be prioritised for the various stages of recovery, from introduction and policies, to detailed construction advice, to grievance and complaint advice. This requires continuous effort and input and should be informed by feedback and by tracking impact. Ineffective communication channels or messages should be curtailed and efforts redirected to optimise resources. Capture and sustain interest by diversifying and updating communication strategies.

Activities under mass communication media can be categorised according to communication medium or channel:

- Video (TV, internet)
- Audio (radio, internet)
- Printed materials (posters, billboards,)
- Social media (internet)

# 6.0 Video: television, film and internet

Video refers to the electronic recording and broadcasting or display of moving visual media. Video commonly includes audio content (audio-visual).

Video may be carried on a variety of media including broadcast media (TV), network streaming, web platforms, computer files, discs or drives, accessed on TV, computer, tablet and mobile phones. Video used in communication to support post-disaster recovery may include short clips or extended content encompassing a wide range of topics.

Audio-visual communication is accessible and engaging, facilitating the preparation and dissemination of complex visual subjects such as construction along with verbal explanations.

## Implemented by

- Video production: Any actor that has the means to produce high-quality video.
- Video dissemination: Any actor that has access to a channel that can host video (national television, websites, YouTube, social media). Dissemination may be promoted by producers or others providing weblinks to video content. Web hosted content may be accessed by mobile phone, tablet or computer.

## Target audiences

- Target audiences vary according to the content and the dissemination channel including:
  - Disaster-affected populations engaging in recovery
  - National general public, including authorities, and civil society
  - Diaspora
  - International general public, including other governments, donors, and assistance agencies
  - Technical community (national and international)
- Broadcast media (TV) reaches general public audiences. Existing TV stations have listenership/ audience profiles which can inform the planning of content and dissemination.
- Webhosted video (YouTube, gifs) relies on promotion by producers, search engines or other media weblinks to reach general public or targeted audiences.

## Preconditions

- TV broadcasting capacity is restored.
- Official policy information or announcements may be provided by government or validated by government.
- 'How-to' technical information may be subject to government technical validation authorisation.
- Government may have agreements for public service announcements, news items, press statements or airtime with state or private broadcasters.
- Journalists and media may be subject to national broadcasting standards including right of reply, balanced coverage and verification of facts.

## Objectives

- Ensure accessible, accurate and timely communication of complex and often visual topics
- Provide proxy experiential learning opportunities through video communication
- Generate content that can be used in various activities including community- based activities (TV, web, training, outreach)
- Generate content that can be transferred and remain available on demand in the long term

## 6.0 Video: television, film and internet

### Activities/types

**Announcements:**

- Public service announcements including weather warnings, evacuation and other instruction notices, policy and institutional announcements including where to go for further information. Public service announcements may be stand alone, or incorporated into news programmes.

**Reporting:**

- Field reporting of disaster impacts. Used to communicate situation for humanitarian response and recovery planning. Used to commemorate the event and as a reference starting point for recovery progress.
- Reports or documentaries at various stages of recovery illustrating and discussing recovery progress, challenges, and support activities. Documentary length may vary from a few minutes to full feature film length (approximately 2 hours) or a series of episodes.
- Drone footage and other tools can provide unique overviews including of inaccessible areas.
- Relevant content from other disaster-affected areas; for example, reporting on early warning systems in action.

**Discussion:**

- Interviews with representatives of affected populations (households, masons, community leaders, elected officials) and/or with recovery stakeholders (government, assistance agencies, technical institutions).
- Debates between recovery stakeholders.

**Guidance:**

- On-site documentation of building damage, analysis of building failure and defects. Evidence of building damage may be expected to be demolished and removed.
- Step-by-step construction, repair or retrofitting guidance and demonstration using actual buildings and materials. Guidance on material testing or other construction-related activities.
- Stop-motion animation of drawings or computer graphics, related to construction.
- Filmed training sessions, lessons and presentations.
- Relevant content from other areas; for example earthquake shake table testing, demonstration of retrofit performance.
- Voice-over slide shows.
- Animated content for children or adults.

***Note:*** *Translation of content to from local languages may be through audio or through subtitling.*

## Related activities

- Coordination: With the national and local government, technical assistance agencies to provide and/or validate policy or technical information, to guide on priority issues and information sources (including locations, interviewees, data).
- Planning: Funding for development of content and for dissemination. Agreements with distribution channels for official communications.
- Linkages: The development of content may be linked to practical activities (e.g. model house construction to provide step by step data), press conferences held by government, as well as laboratory or classroom demonstrations. The development of dissemination may be linked to planning for curricula and training programmes or community-based outreach such as incorporating instructional videos in community orientation sessions.
- Monitoring audience and feedback: monitoring of audience numbers, origin, and profiles. Monitoring of video use and feedback on impact, content and communications.
- Monitoring audience and feedback: monitoring of audience numbers, origin, and profiles. Monitoring of video use and feedback on impact, content and communications.
- Media training: Journalist training in disaster management may ensure more informed facilitation of discussions and production in reporting. Media training of officials may ensure more effective explanation.

## Benefits/Challenges

Powerful and rapid means to mobilise support for humanitarian response and recovery. Highest demand for video content nationally and internationally is for disaster impacts. Dissemination is widespread and rapid.

Very accessible and engaging communication method for a wide range of audiences, including where populations have low literacy levels or speak various languages, as the emphasis is on visual information.

Enables political leaders and recovery stakeholders to be seen and heard directly by affected populations.

TV and internet are familiar and frequently used communication channels for news and other content. State broadcasters and media and often considered trustworthy sources of information.

Official announcements and technical information can be validated or quality assured for accuracy.

Enables high value expertise, demonstration and other activities to reach very wide audiences cost effectively.

Increases the quality and accessibility of training and community-based activities through using prepared content.

Video content is becoming increasingly democratised as technologies such as drones and mobile phones improve in quality and cost and as platforms for uploading become more efficient.

The level of media interest, demand for video content and investment in field reporting decreases significantly after the initial disaster, often reduced to official openings of projects or anniversary visits to report progress.

Producing content can be expensive due to time involved in preparatory work or when utilising high-quality equipment for sound and camera. High skill levels may be required for editing.

Video content has to compete with other content for expensive scheduled time on mainstream TV channels.

The democratisation of content and platforms means a plethora of video content may be made, disseminated widely and become influential without verification of facts or presentation of informed analysis, particularly on topics such as the speed of recovery or the insufficiency of government assistance.

Good quality content may only reach limited audiences on web platforms if not actively promoted due to the large number of items available.

Original video files can involve large files which are cumbersome to store or transfer. Access to video is often not maintained by government and other producers/owners and is difficult to retrieve for future audiences.

Weblinks can expire and protocols require renewal or maintenance to ensure continued access to web hosted content.

## Case Study
## No Strings International short puppet series, Tales of Disasters

**No Strings International** makes films with masters of the original Muppet Show for children in emergencies around the world. The films are available online or may be shown as part of animation workshops with children involving puppet making and play following the screening.

No Strings assembles messages from sector experts and turns them into lessons played out through fun and moving world class-quality puppet films. The content is graspable by 8-12 year olds, but there is enough complexity for older teenagers and adults to also enjoy and find the films thought-provoking.

The '**Tales of Disasters**' series introduces a group of regular recognisable characters who experience disasters, including a school girl who knows what to do in disaster situations and guides others. The series started in partnership with the Irish INGO Trócaire and local partners in the aftermath of the Asian tsunami in 2005, and empowers children to know what they can do during earthquakes, tsunamis, volcanoes, floods, landslides and cyclones. The films reflect, but do not starkly depict, reality, presenting preparedness and safety measures in ways that children can readily engage with.

So far, the series has been dubbed into 14 local languages for ongoing use by partners in the Southeast Asia region including in Indonesia, East Timor, Myanmar, Cambodia and the Philippines. More recent projects extend to Madagascar with films for cyclones and floods/landslides.

www.nostrings.org.uk/programmes/tales-of-disasters/watch-trailer

*Tales of Disasters series of puppet films.*
***Source:*** *No Strings International.*

*In Madagascar children make model village exposing local risks and vulnerability.* ***Source:*** *No Strings International.*

*Philippines school watching No Strings International movie.*
***Source:*** *No Strings International.*

## 6.0 Video: television, film and internet

### Case Study
### Tutorial film: Hurricanes: How to build a safer wooden house (IFRC 2008)

This 13 minute film shows how to build a safer shelter or timber housing, and serves as a tutorial on hurricane resistant techniques applicable throughout the Caribbean. The film was developed through step-by-step documentation of construction on site in Jamaica, with additional technical drawings and animation. Sound is recorded separately, facilitating translation into English, French and Spanish. Links to similar tutorials in other technologies are available on the IFRC website and on Youtube.

www.youtube.com/watch?v=vp7FxW0Ze6Y

### Case Study
### Documentary film: Fatal Assistance (Assistance Mortelle) (2013)

The documentary by award-winning, Haitian-born filmmaker, Raoul Peck, follows two years of recovery in post-earthquake Haiti, exploring the challenges and complexity in the enormous reconstruction process, and questioning the role of humanitarian and development aid in Haiti and in recovery worldwide.

# 6.1 Audio: radio and internet, sound recording

Audio and radio refer to the recording and broadcasting of sound.

Audio content may be carried on a variety of media including radio, network streaming, web platforms, computer files, discs or drives, accessed on radio, computer, tablet and mobile phones. Audio used in communication to support post-disaster recovery may encompass a wide range of topics and include short announcements such as phone messages, public service announcements or extended content such as radio shows.

Radio can reach dispersed audiences with rapid information and facilitate public discourse through interactive discussion over the course of recovery.

## Implemented by

- Radio production: Radio broadcasters, journalists, production companies or any actors with the means to produce audio content.
- Radio dissemination: Radio stations and web platforms for live and podcast dissemination. Content may be disseminated through syndicated programming or contracts with stations to ensure coverage. Web-hosted content may be accessed through mobile phone, tablet or computer.

## Target audiences

- Target audiences vary according to the content and the dissemination channel including:
  - Disaster-affected populations engaging in recovery.
  - National general public, including authorities, and civil society.
  - Diaspora.
  - Radio may target specific constituencies such as populations in remote areas, commuters, women or others based in the home.
  - Radio may geographically target according to local radio station coverage area.
- Existing radio stations have listenership/audience profiles which can inform the planning of content and dissemination.

## Preconditions

- Radio broadcasting capacity is restored.
- Official policy information or announcements may be provided by Government or validated by Government.
- Government may have agreements for public service announcements, news items, press statements or airtime with state or private broadcasters.
- Journalists and media may be subject to national broadcasting standards including right of reply, balanced coverage and verification of facts.

## Objectives

- Ensure accessible, accurate and timely communication of critical information for recovery
- Improve public discourse through facilitating debate and discussion on recovery issues
- Support the identification of recovery challenges and demands for policies and for information, through two-way communication
- Support the planning and implementation of community-based technical assistance through local media promotion and reporting

## 6.1 Audio: radio and internet, sound recording

### Activities/types

- Audio communication may be broadly categorised as announcements, reporting and discussion. Announcements tend to be one-way provision of data. Discussion tends to involve a range and exchange of views. Both announcements and discussion may be produced and disseminated at national or local levels.

**Announcements:**

- Public service announcements: including weather warnings, evacuation notices and instructions, guidance for preparation measures, announcements of policies, types and levels of assistance, terms and conditions including eligibility, terms and conditions, dates and deadlines, information on institutional arrangements, where to get further information. Public service notices may be stand-alone, repeated frequently, or incorporated into news programmes. Content requires validation.
- Local announcements: announcements of local activities including dates, locations and procedures for damage assessment, shelter assistance, training, information sessions, model house events, building inspection may support the planning and implementation of government and non-government activities.
- Advertisements: material producers, vendors, construction professionals and other recovery stakeholders may advertise their goods or services.

**Reporting:**

- Reporting or documentaries: Audio reports or documentaries by journalists at various stages of recovery describe or discuss recovery progress, challenges, support activities. Audio reports rely on verbal description and interviews.
- Guidance: Hosts or reporters or guests providing advice indirectly through interviews and responses to questions.
- Infotainment: information+ entertainment. Audio content may combine dramatization or sketches with communicating information or discussion. Content may be scripted or improvised.

**Discussion:**

- Interviews/debates: Interviews with representatives of affected populations (households, masons, community leaders, elected officials) and/or with recovery stakeholders (government, assistance agencies, technical institutions). Interviews/debates may be incorporated into news programmes, may be pre-recorded/edited or live/unedited. Interviews/debates may cover a wide range of topics from political and institutional commitment to the feasibility of retrofitting.
- Interactive radio, call-in radio: Call-in radio programmes may involve responses from, or discussions with, the radio host or guests including officials. Questions may be submitted by telephone, email, tweet or other channels, in advance or live. Call-in radio may provide clarification on information or may provide debate on issues.

## 6.1 Audio: radio and internet, sound recording

### Activities/types

**Sound recording:**

- Music recordings: Songs composed to describe the experience of disaster, to express aspirations for recovery or to comment on issues in recovery may form part of public discourse. Target audiences may range from decision makers to young people. Objectives may include promoting engagement or inclusion.
- Spoken word recording: Talk or discussion composed to describe the experience of disaster, to express aspirations for recovery or to comment on issues in recovery may form part of public discourse. Recordings may be made by religious or cultural leaders, by political leaders, or by civil society activists. Objectives may include advocacy or mobilising followers.

***Notes:***

*Audio content may be produced in advance or be disseminated live and unedited. Audio content may be only available live or may be retrieved on demand online. Audio translation may be required to/from local languages.*

### Related activities

- Coordination: with the national and local government, technical assistance agencies to provide and/or validate policy or technical information, to guide on priority issues and information sources, including interviewees.
- Planning: Funding for development of content and for dissemination. Agreements with radio channels for official communications.
- Linkages: The development of announcements may be linked to press conferences or may have a mechanism to submit notices of events for example.
- Collection and analysis of frequently asked questions by media, by technical assistance actors or by helpline facility may inform content of discussion programmes, or may be relayed to authorities to address through announcements in response to information demands.
- Monitoring audience and feedback: monitoring of audience numbers, origin, and profiles. Monitoring of video use and feedback on impact, content and communications.
- Media training: Journalist training in disaster management may ensure more informed facilitation of discussions and production in reporting. Media training of officials may ensure more effective explanation.

### Benefits/Challenges

Radio is a widespread and preferred communication medium across many parts of the world with low cost access and familiar use.

Both national and local radio station capacity exists in most countries with extensive infrastructure, experience and knowledge to inform the development of content and planning for dissemination. State and local broadcasters are often considered trustworthy sources of information.

Radio is accessible in remote locations and for mobile populations, for women, elderly and other housebound profiles, all of whom may have difficulty accessing information in-person.

Radio enables populations with limited time to access information while they continue their daily tasks, compared to participation in training or community-based activities.

Production of audio content can be rapid and low cost. Content development or participation is accessible to a wide range of people.

Local radio and local audio production can ensure local languages and terminology are used to ensure information and discussions are accessible to local audiences and reflect local social and cultural practices. Audio is accessible where literacy levels are low.

Video and audio both facilitate discussion through interviews and debate. Radio is more likely to incorporate interactive discussion and broader participation. Analysis of issues, interrogation, argument and presentation of different viewpoints through discussion play vital communication roles of explanation and advocacy.

Audio content is becoming increasingly democratised as technologies such as mobile phones improve in quality and cost and as platforms for uploading become more efficient.

Audio enables political leaders and recovery stakeholders to be heard directly by affected populations.

Official announcements and technical information can be validated or quality assured for accuracy. Editing or

producing content provides opportunities to assure quality or effectiveness.

Radio transmissions may only be available live without options for storage and retrieval, limiting the transfer and impact of information.

The democratisation of content and platforms means a plethora of audio content may be made, disseminated widely and become influential without verification of facts or presentation of informed analysis, particularly on topics such as the speed of recovery or the insufficiency of government assistance. Quality assurance is particularly difficult to control in live radio broadcasts.

Audio relies on verbal information. It is effective for short announcements, interviews and debate, but without visual information, it is difficult to communicate physical conditions or explain technical information on construction.

## Case Study
## Pakistan 2005 earthquake: communicating between the capital and remote households

Radio was the primary media channel in Pakistan after the 2005 Kashmir earthquake, reaching over 10 million disaster-affected people in very remote areas. Local stations entered agreements to relay centrally-produced announcements and programmes in addition to broadcasting local shows. Radio enabled the Government of Pakistan Earthquake Reconstruction and Rehabilitation Authority (ERRA) to disseminate information much more quickly than via print media, from the federal capital, Islamabad, and to get messages directly into households, including to women and to those without a good standard of literacy.

*Remote rural communities affected by the Kashmir earthquake.* **Source:** *UN-Habitat.*

ERRA produced public service announcements which were broadcasted with a standard jingle, and with Koffee Kommunications and UN-Habitat, produced a weekly infotainment radio show focused on housing recovery, which was repeated a number of times during the week through local networks.

The weekly show, which ran for 3 years, provided a single authorised source of information reflecting a single ERRA umbrella for housing recovery activities. The programme provided a platform for several government authorities, assistance agencies and technical experts to explain how they were working together, and to contribute to public discourse on a range of housing topics.

The format included comedy sketches, policy updates and technical discussions. The radio show host was a well-known media personality who managed to maintain listeners' attention, keep technical discussions accessible, and was trusted as impartial. Conversations with decision-makers including senior officials were more effective than adversarial interviews to generate explanations, and afforded them opportunities to become familiar and trusted by households.

UN-Habitat compiled frequently asked questions and concerns, on a weekly basis across the affected districts, for ERRA to prepare answers in advance. This process helped to keep ERRA informed of, and accountable to respond to recovery priorities, and the content was built into each show to ensure it was based on information demands.

The ERRA housing programme involved numerous revisions and additions to policies, standards, and guidance. This was positive in terms of responding to needs, but could have caused widespread confusion. ERRA's use of radio helped to identify which revisions were required, and to make sure decisions were broadcast through an authorised channel, and immediately actionable by all those who needed to know.

## 6.1 Audio: radio and internet, sound recording

### Case Study
### Radio in electricity blackout Puerto Rico after Hurricane Maria

In rural areas, where total electricity blackouts continued for a number of months and limited internet access, functioning radio stations were essential for local people to get information related to their situations. Beatriz Archilla, head of AM radio station WALO, located on the eastern coast of Puerto Rico, said that 90percent of her programming was recovery related. She was reliant on local government officials stopping by the radio station to share updates on basic services. Archilla said the other major information gap was around how and when people could start the process of applying for recovery assistance with FEMA, or, "news you can use."

www.internews.org/story/palante-assessment-information-needs-puerto-rico-after-hurricane-maria

### Case Study
### The role of community radio in disasters

As Zane Ibrahim, founder of Bush Radio and known as father of South African community radio, said: "community radio is made up of 90 percent community, 10 percent radio," meaning that community radio uses the radio for community building. In the same way, disaster radio also uses the radio for support and recovery/rehabilitation activities.

P.14. The role of community radio in disasters (2012) Church World Service (CWS) Graduate School Of Global Environmental Studies, Kyoto University (KU GSGES) Mercy Malaysia

www.preventionweb.net/files/29931_29931radioalllowres1.pdf

### Case Study
### Case Study: Bangladesh NGOs Network for Radio and Communication (BNNRC)

The development of local radio capacity in communication for weather warnings and recovery information.

www.bnnrc.net

# 6.2 Press/print media: newspapers, magazines, books, academic journals and internet

Press or print media includes local, national and international newspapers and magazines and academic or scientific journals. Press describes existing publishing channels producing or disseminating recovery-related content as distinguished from government or non-government stakeholders producing or disseminating posters, brochures to support recovery.

Press or print media may have wide general public readership or a highly selective constituency readership, in paper form or online. Access may be free, with cover price or subscription only. All press is produced in advance.

## Implemented by

- Journalists and contributing authors in newspapers and press
- Academic/scientific authors or technical professionals in academic journals
- Journalists, political leaders, recovery stakeholders in books

## Target audiences

- Target audiences vary according to the dissemination channel including:
  - National newspapers : general public, diaspora, international audience
  - Local newspapers: targeted geographically, diaspora
  - Magazines: targeted thematically
  - Books: targeted thematically
  - Academic press: targeted thematically to academic audience.
- National and local newspapers have readership profiles which can inform the planning of content and dissemination.
- Language may be a determining factor in target readership.

## Preconditions

- Print production and distribution capacity is restored.
- Official policy information or announcements may be provided by Government of validated by Government.
- Government may have agreements for public service announcements or press statements with state or private press.
- Journalists and publishers may be subject to national press standards including right of reply, balanced coverage and verification of facts.
- Academic publication is commonly subject to peer review.

## Objectives

- Ensure accessible, accurate and timely communication of critical information for recovery.
- Improve public discourse through facilitating investigation and debate on recovery issues.
- Support the planning and implementation of community-based technical assistance through local media promotion and reporting.
- Generate content that can be kept for reference, transferred and remain available on demand in the long term.

## 6.2 Press/print media: newspapers, magazines, books, academic journals and internet

### Activities/types

- Print media is mainly text based but may also use maps, infographics, tables, photographs and drawings for content.

**Daily and weekly newspapers/press:**

- Communication includes announcements, guidance, reporting and debate.
- Newspapers may be accessed in hard copy or online.

**Announcements:**

- Public service announcements: including weather warnings and guidance, announcements of policies, assistance, institutional arrangements, where to get further information. Content requires validation.
- Local announcements: announcements of local activities including dates, locations, programmes and contact details may support the planning and implementation of government and non-government community-based technical assistance.
- Advertisements: material producers, vendors, construction professionals and other recovery stakeholders may advertise their goods or services in national or local press.

**Guidance:**

- Guidance on aspects of recovery may be provided as editorial content in newspapers or provided as inserts accompanying newspapers and distributed through agreement with the publisher.

**Reporting:**

- Reports at various stages of recovery describing or discussing recovery progress, challenges and support activities. Reporting may use infographics to present data on topics such as reconstruction rate, finance or compliance. Reporting may use case studies to illustrate and explain recovery issues.

**Discussion:**

- Newspapers may promote discussion on recovery through publishing a range of opinion pieces and views, from journalists, political stakeholders, technical professionals and affected communities.
- Newspapers may promote discussion through readers' letters pages, or through blog comments on online platforms.

**Academic press:**

- Academic press includes edited and peer reviewed academic journals publishing research and analysis on aspects of recovery, including technical and social sciences.

## 6.2 Press/print media: newspapers, magazines, books, academic journals and internet

### Related activities

- Coordination: with the national and local government, technical assistance agencies to provide and/or validate policy or technical information, to guide on priority issues and information sources, including interviewees.
- Planning: Funding for development of content and for dissemination. Agreements with radio channels for official communications.
- Linkages: The development of announcements may be linked to press conferences or may have a mechanism to submit notices of events for example.
- Collection and analysis of frequently asked questions by media, by technical assistance actors or by helpline facility may inform content of discussion programmes, or may be relayed to authorities to address through announcements in response to information demands.
- Monitoring audience and feedback: monitoring of audience numbers, origin, and profiles. Monitoring of video use and feedback on impact, content and communications.
- Media training: Journalist training in disaster management may ensure more informed facilitation of discussions and production in reporting. Media training of officials may ensure more effective explanation.

### Benefits/challenges

Newspapers have a long established presence and capacity in most countries. They are familiar and trusted sources of information.

Newspapers have adapted to provide online content, retaining their previous roles and reaching new readerships. Online platforms may facilitate free or low cost access.

Printed content can be controlled, attributed, authorised and referenced. It has advantages over video and audio that there is a tangible, portable record of data, including policy announcements and other key statements. Citable data can assure consistency and accuracy for the disaster-affected population and equip authorities and technical assistance actors. Authorities can maintain a record of notifications.

Printed media is flexible to communicate short summary data or comprehensive data. Print can accommodate more detailed data than audio or video (e.g. maps, numbers, lists and extended text).

Print media is available in local languages.

Academic press can provide mainly web-based access to a wide range of recovery data from other disasters and contextualise data from a specific disaster. Specialised journals enable discourse between professionals within disciplines. Editorial and peer review mechanisms ensure quality of content.

Newspapers rely on adequate literacy levels and cover prices or subscription. Readership may be lower than radio listenership or TV viewership.

Newspapers may have limited circulation in remote areas.

Issues raised in local newspapers may not have an impact at national or policy level.

Academic publication is predominantly restricted to expensive subscription access. Publication of articles may be several years after articles are written, research is carried out or disasters occur. Content may be highly specialised and challenging for general readers. Limited readership and long intervals mean articles have limited impact on recovery policies or practice.

Content may not be stored securely for long-term retrieval.

## 6.2 Press/print media: newspapers, magazines, books, academic journals and internet

### Case Study
### National Geographic: five years on, Superstorm Sandy Houses Rise Up

The National Geographic Society is a non-profit, scientific and educational organisation. Its interests include geography, natural, and social sciences. In partnership with the Walt Disney company, the National Geographic Society operates a magazine with global print circulation in 40 local languages, TV channels, a website, worldwide events, and other media operations. National Geographic's various media reach over 280 million people monthly.

The National Geographic Society reports on housing and settlement recovery after disasters in many countries around the world, combining high-quality photojournalism with feature length articles to provide contextual analysis, accessible human experience stories, and visual evidence.

*Source: Ira Wagner.*

This report on housing reconstruction along the New Jersey coastline 5 years after Hurricane Sandy (2012) documents residents' responses to disaster risk, their options, and choices made in recovery.

Reconstructed houses have been lifted above ground level in preparation for future flooding and with implications for access, living patterns, and streetscapes.

Photography of a series of individual houses and their plots enables viewers to understand detailed technical aspects and patterns of changes in housing typologies and construction practices.

*Ira Wagner for National Geographic Society.*

www.nationalgeographic.com/magazine/2017/12/superstorm-sandy-new-jersey-house-raising

### Case Study
### The role of the media after Hurricane Katrina (2005) was crucial, and reporters became involved in crisis management

As telephone systems collapsed or were swept away, reporters and broadcasters became, in some cases, the only link between stranded refugees and the authorities. The Times-Picayune, a local New Orleans newspaper, lost its printing presses but concentrated coverage on its website, which became a vital link for rescue operations. The media also played an important role in the initial warnings, and afterward in the analysis of the causes of the disaster.

P. 118-119. Disaster through a different lens. Behind every effect, there is a cause. A guide for journalists covering disaster risk reduction. UNISDR.

# 6.3 Printed materials

'Printed materials' describes items prepared specifically for recovery-related communication, including billboards, posters, flyers, brochures and other items. Printed materials differ from press or print media in terms of content, production and dissemination as printed materials are generally available at no cost.

Printed materials use images (photographs, illustrations, technical drawings) and text for communication. Printed materials may be published in very large numbers and disseminated to a wide audience or may be small print runs for targeted audiences. Content may be available online.

## Implemented by

- Government, assistance agencies, technical stakeholders, and mass media
- Funding for development and dissemination of materials from recovery assistance sources

## Target audiences

- The audience for printed materials is the disaster-affected population or at risk population.
- Materials may be customised for target specific groups. Groups may be defined geographically or by profile (e.g. masons, vendors, women, young people). Detailed printed materials may be developed for technical audiences including engineers and masons, often associated with training or demonstration events.

## Preconditions

- Display, print production and distribution capacity is restored.
- Official policy information or announcements may be provided by or validated by government.
- Government may have capacity or agreements for preparation and distribution of printed materials (e.g. postal distribution).

## Objectives

- Ensure timely saturation communication coverage to introduce and familiarise policies, programmes, standards, and institutions for recovery.
- Support visibility of government, assistance agencies, technical or other recovery stakeholders. Direct communication ensures consistent and accurate content.
- Support the planning and implementation of training and community-based technical assistance.
- Generate content that can be kept for reference, transferred and remain available on demand in the long term.

## 6.3 Printed Materials

### Specifications

**Billboards/public display:**

- Billboard/public display content must be succinct.
- Billboards/signs may be location specific, directing the public to services or highlighting events.
- Billboards may be digital or print, commercial or public sites.
- Non-billboard public display may include banners, flags and other signage which may carry images or text. Locally produced public display including wall painting is described under community-based outreach.

**Posters/flyers:**

- Poster/flyer content includes announcements, step by step advice, specifications, advocacy messages and other advice. Content is normally in local languages and simple terminology with strong visual communication.
- Posters/flyers may be distributed including through events or may be viewed on display in offices and shops.
- Posters/flyers may be centrally produced large print runs, or ad hoc locally produced notices.

**Brochures and documents:**

- Multi-page brochures and documents to accompany training or technical assistance activities may be distributed to participants and may be available as online resources for wider audiences.

### Related activities

- Coordination: with the national and local government, technical assistance agencies to provide and/or validate policy or technical information, with production and distribution channels.
- Monitoring audience and feedback: monitoring of audience: numbers, origin, profiles. Monitoring of feedback on impact, content and communications.
- Printed materials may be distributed at community-based events to provide a record and more detailed reference for participants.
- Extensive printed materials may be distributed in association with training and community-based outreach activities, providing resource materials for both trainers and participants.

### Benefits/challenges

Printed materials can be devised and disseminated to meet specific communication needs for recovery. Content and timing can focus on single issues as compared to mixed content communicated through commercial channels. Content can be tailored for specific target audiences.

Printed materials can be controlled, attributed, authorised and referenced. They have advantages over video and audio that there is a tangible, portable record of data, including policy announcements. Citable data can assure consistency and accuracy for the disaster-affected population and equip authorities and technical assistance actors. Authorities can maintain a record of notifications.

Printed materials can reinforce government, agency or programme identity and leadership through strong branding. The source of information is a critical factor in how information is perceived.

Printed materials can be primarily visual and designed according to the context and target audience. Printed materials can be provided in local languages.

Step-by-step guidance both for regulatory processes and for construction processes can provide clear explanations and references to be used as required.

Printed materials are flexible to communicate short summary data or comprehensive data, large scale or small scale print runs.

Online platforms may facilitate free or low cost access

Printed materials can add significant value to training, demonstration and orientation events

Printed materials can take considerable time to develop, writing and graphic skills for production, consensus between authors and validation by authorities. Inputs required are often underestimated.

Timing and dissemination strategies are vital to optimise the investment in printed materials to effectively reach target audiences.

## 6.3 Printed materials

Printed materials alone may have limited impact. They will be more effective used in association with training, demonstration and orientation activities.

Printed materials are difficult to retract or retrieve once released. Information requires validation to mitigate the risks of inaccuracy and confusion.

Printed materials are durable, remaining in circulation longer than newspaper articles.

Commercial billboard sites may be expensive. High quality printed materials may be expensive. In both cases, governments may have preferential rates.

### Case Study
### Pakistan 2005: billboard over the bus park

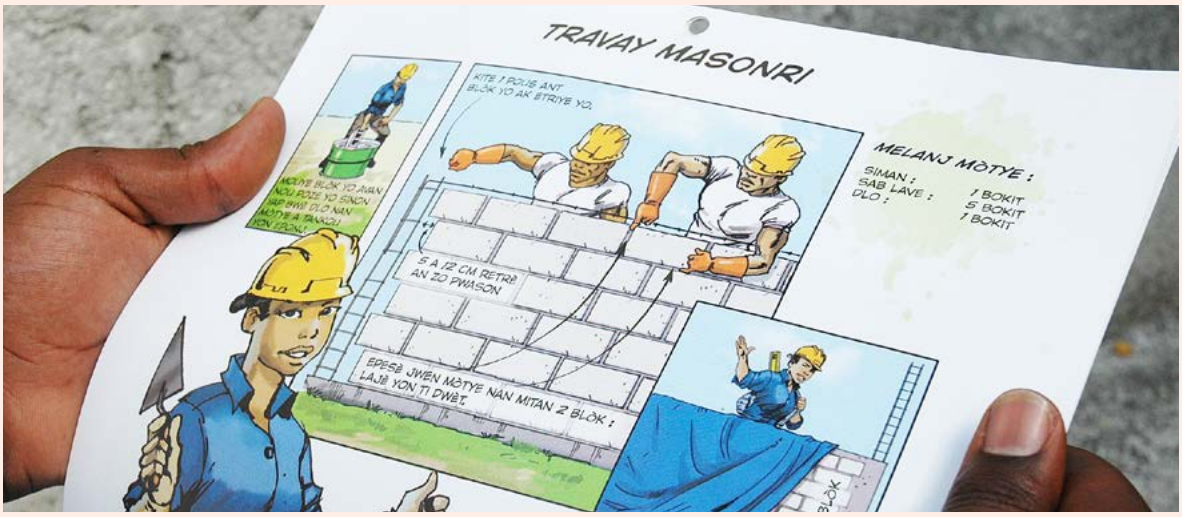
This billboard overlooking the bus park in Muzaffarabad, Pakistan, communicates the message that the safety of one's family and home are in the hands of their mason, so it is important for owners to hire a trained and skilled mason who knows how to build safely. The billboard overlooks the main bus park, where many disaster-affected residents are travelling to and from markets, and where new migrant labourers arrive. The message was intended to inform households to recruit carefully and to inform new workers to seek locally available training.

Billboards are not appropriate to present complex technical information, but were used to announce new policies or deadlines, to direct people to where they could find advice, and to prompt public debate and reflection on issues such as who is responsible for the safety of new houses.

*Source:* UN-Habitat.

### Case Study
### Calendar produced by Swiss Cooperation for Development

This printed calendar was used to illustrate the Haiti building code for confined masonry in step-by-step information translated into Haitian Kreyol.




*Source:* Swiss Cooperation for Development.

## Case Study
### Pakistan 2005: ERRA housing recovery policy and process poster

This poster communicates the step-by-step process of housing reconstruction envisaged in the Government of Pakistan policy. The poster explains the sequence of damage assessment, financial assistance through tranche payments to bank accounts, training on standards, and stage inspection of construction. It was produced in local languages and distributed to 1 million households at the outset of recovery. A range of early documents, posters, and other materials communicated the housing policy simply and briefly, each using a single page, to ensure target audiences developed an overview of the various policy components, and could envision the sequence for their own housing reconstruction going forward.


*Source:* *Earthquake Rehabilitation and Reconstruction Authority (ERRA).*

# 6.4 Recovery web sites/platforms

Recovery web sites or platforms refer to internet-based applications that enable people to access information, and to communicate and share information. Recovery web sites/platforms are accessed by computer, tablet and increasingly by mobile phones.

Recovery web sites/platforms involve content produced, edited, hosted and disseminated by government authorities or recognised recovery stakeholders including technical institutions, humanitarian and development agencies, research and academic partners.

Recovery web sites and platforms may include social media page, for example, that enable further dissemination by followers/target audiences.

### Implemented by

- Government
- Technical assistance agencies
- Research and academic agencies

### Target audiences

- National and local government authorities
- Recovery stakeholders: funding and implementing agencies, technical institutions, media, and national and international disaster management communities
- Disaster-affected households and communities
- General public nationally, diaspora and internationally

| | |
|---|---|
| **Preconditions** | • Internet coverage, mobile phone network coverage is restored or available<br>• Data may be provided or validated by government. |
| **Objectives** | • Facilitate reliable one-stop-shop access to housing recovery information, including policies, standards, financial assistance and technical assistance<br>• Facilitate access to up to date information on recovery progress, issues and priorities<br>• Facilitate coordination between decision making and implementing recovery stakeholders, and synergies between programmes and activities<br>• Increase transparency and accountability in technical assistance activities through public access to information<br>• Increase demand-led access to information and enable people to contribute data.<br>• Facilitate learning and knowledge management through durable access to data |

## 6.4 Recovery web sites/platforms

### Specifications

- Web hosted data for access to the following data:
  - Recovery websites hosted by government
  - Event specific recovery websites or platforms hosted by technical assistance stakeholders, coordination or research stakeholders
  - Institutional or thematic websites or platforms hosted by government, technical or research stakeholders
  - Hosted content includes data for access or download (documents, videos, images, tables, maps, reports, notices)
  - News including announcements of policies, notification of upcoming events and reports on recent events
  - Notifications may include early warnings, weather alerts, evacuation alerts or links to civil protection sites for details on same.
  - Data may include minutes of meetings, details of programme budgets and expenditure and other content to reinforce accountability and transparency by recovery actors.
- Sites may have varying levels of access to data, for authorities, for implementing partners and for the public.
- Sites may facilitate data collection and exchange by providing platforms for content produced by partners including assessments, reports, and images.

### Related activities

- Web presence is an advantage for recovery-mandated institutions or authorities and for technical assistance stakeholders to communicate policies, programmes, progress, and news.
- Event-specific websites can promote participation in training and community-based activities through announcements.

### Benefits/challenges

Websites enable largely free and instant access to information for a wide range of readers/viewers/listeners.

Recovery websites (government or technical assistance agency hosted) can provide a one-stop-shop for recovery related information, simplifying information searches for the public, for media and others. Content may include policies, standards, announcements, and maps. Content can be controlled and quality assured to mitigate confusion.

Event-specific websites or platforms can streamline information searches in contexts where many sources are available.

Web-hosted information can be updated more quickly and easily than printed materials. Content is under the control of producers and flexible to accommodate a wide range of formats.

The space for web-hosted data is vast. A large amount of data can, in theory, be accessed or retrieved in the future. In practice, data storage and maintenance is patchy and, at times, unreliable.

Web-based information may be more familiar and accessible to some profiles more than others, depending on their use of technology.

Web-based information may or may not be available in local languages or using simple terminology, and depend on literacy levels.

Web based information may require fast internet speeds which pose challenges for remote populations, or for low income groups without affordable options to access the internet.

Government communication cultures may emphasise printed materials and other channels rather than web-based communication.

## Case Study
### Canterbury Earthquake Recovery Authority (CERA) New Zealand: managing information and communication for recovery and for the longer term

The Canterbury Earthquake Recovery Authority (CERA or Maori Te Mana Haumanu ki Waitaha) was the public service department of New Zealand charged with coordinating the rebuilding of Christchurch and the surrounding areas following the 2011 earthquake. This included being a major information conduit for the public. CERA's experience provides lessons for dedicated recovery agencies in managing communication during the recovery, and in managing institutional transitions that ensure data and knowledge remain accessible for the future.

CERA developed a Community Engagement Strategy that committed them to working transparently and inclusively. The goal was to enable communities and individuals to participate in decision making on rebuilding and revitalising greater Christchurch. CERA addressed internal communication and information needs for staff and concerned authorities, and external communication and information with disaster-affected individuals, communities, and stakeholders.

CERA's external or public communication and engagement approach included developing and providing CERA materials for community organisations to lead their own community events and developing tools for the public to access land zoning decisions. *The My Property (Landcheck)* website, for example, developed in June 2011, made extensive geotechnical data available. Through the online "look up" service, home owners could check their individual property status and see whether their land was suitable for rebuilding. By September 2011, the website had received well over 10 million hits.

www.eqrecoverylearning.org/assets/downloads/res0015-creating-technologies2.pdf

CERA was disestablished in 2016, and their roles and responsibilities transferred to a range of national and local authorities. CERA ensured that extensive recovery documentation remains accessible, and that people can easily find directions to the respective current authorities responsible for information and assistance on the regeneration of greater Christchurch.

**Directions to current contacts and information:**

www.dpmc.govt.nz/our-business-units/greater-christchurch-group/roles-and-responsibilities/disestablishment-cera

**Directions to CERA data from 2011-2016:**

The CERA document archive website contains documents, reports, and public information released by Canterbury Earthquake Recovery Authority and the Christchurch Central Development Unit between 2011 and 2016.

www.ceraarchive.dpmc.govt.nz

**Directions to earthquake recovery learning:**

The *EQ Recovery Learning* website is part of the Department of the Prime Minister and Cabinet, working with organisations and groups including the private sector, community organisations, social enterprise, and government, to bring together collective learning from the Canterbury earthquakes.

www.eqrecoverylearning.org/about

Among the resources available are institutional lessons learned by CERA: *Communicating in a recovery: CERA's approach to communications and engagement.*

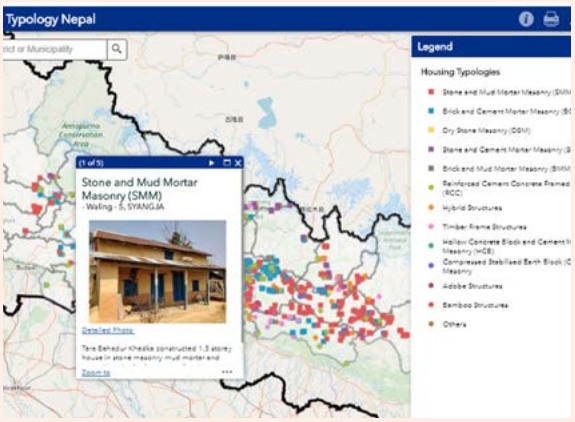
www.eqrecoverylearning.org/assets/downloads/res0030-communicating-in-a-recovery.pdf

## 6.4 Recovery web sites/platforms

### Case Study
### The Housing Recovery and Reconstruction Platform (HRRP) Nepal

In Nepal, the *Housing Recovery and Reconstruction Platform (HRRP)* is a coordination body which launched in December 2015. The HRRP website provides access to reconstruction data through static products such as maps, infographics, data sets, and through interactive dashboards. There is a reference library where a wide range of documents related to the recovery. The HRRP operate facebook, twitter, and flipboard accounts to relay information and produce printed materials and reports.

www.hrrpnepal.org




*Website providing data on housing recovery. Source: HRRP Nepal.*

# 6.5 Social media

The term 'social media' refers to internet-based applications that enable people to access information, and to communicate and share information. Social media involves access by computer, tablet and increasingly by mobile phones. Social media is characterised by rapid changes in technologies and applications, and by diverse use patterns across different age groups, cultures and geographies.

Social media involves content produced and disseminated by any provider with access.

### Implemented by

- Government, technical assistance agencies, and media
- General public, subgroups, and individuals

### Target audiences

- Disaster-affected households and communities
- General public nationally, diaspora and internationally (particularly targeting local, young and mobile audiences)
- Authorities and recovery stakeholders

| | |
|---|---|
| **Preconditions** | • Internet and/or mobile phone network coverage are restored or available.<br>• Official policy information or announcements may be provided or validated by government<br>• Government may have agreements for public service announcements, news items, press statements or airtime with state or private channels<br>• Use of social media may be subject to data protection regulations |
| **Objectives** | • Increase demand-led access to information<br>• Facilitate direct and responsive communication by leaders and authorities<br>• Support mass communication and community-based outreach activities through increased promotion including to younger constituencies<br>• Promote public engagement and public discourse<br>• Mobilise and enable people to participate in activities and to contribute resources and information<br>• Access data on damage, displacement, conditions, progress, perceptions and priorities |

## 6.5 Social Media

### Specifications

**Web hosted data with access to the following data:**

- Recovery-related webpages hosted by media stakeholders
- Recovery-related webpages hosted by recovery stakeholders or commentators
- Hosted content includes data for access or download (documents, videos, images, tables, maps, reports, and notices)

**Discussion:**

- Facebook, Twitter, Instagram posts and follower/audience responses
- Celebrity influencers highlighting or promoting information
- Livestream debates, taking questions, and contributions

**Notifications:**

- SMS alerts, instructions
- Early warnings, weather alerts, evacuation alerts
- Advocacy messages
- Mobilise volunteers
- Group notices
- Notifications can be georeferenced or require 'opting in' from recipients

**Data collection:**

- Collecting data like damage assessment, crowdsourcing, mapping, open street map, georeferenced data
- Data mining of locations of people, tracking mobile phones
- Tracking feedback
- Analysis of social media behaviour, search patterns, uploads
- Crowdfunding to support recovery activities

### Related activities

- Web and social media presence is an advantage for recovery mandated institutions or authorities and for technical assistance stakeholders to communicate policies, programmes, progress, and news.
- Social media can play a role in feedback, monitoring and evaluation through designed methodologies or through mining of data.

### Benefits/challenges

Websites enable largely free and instant access to information for a wide range of readers/viewers/listeners.

Web hosted information can be updated more quickly and easily than printed materials. Content is under the control of producers.

The space for web hosted data is vast. A large amount of data can in theory be accessed or retrieved in future. In practice, data storage and maintenance is patchy.

With a plethora of content producers and dissemination channels, quality and accuracy is impossible to control.

Navigating and adjudicating the value of large amounts of data is challenging.

The language of social media communication is local and accessible, but the technology of social media may be more accessible and familiar to some profiles than others (younger rather than older).

Social media discussions like other forums facilitate convening people with common interests, but also risk exclusion of those with different profiles or interests.

Social media content may not be systematically captured to contribute to policy and programme decision making, or may not be institutionalised as a retrievable record of the recovery process.

## Case Study
### Social media enabling local organisations to coordinate and access information. 2019 Sulawesi earthquake, Indonesia

45 WhatsApp groups were reported operating during the emergency phase of the earthquake response, providing daily updates with critical data, with traffic of over 600 WhatsApp messages per day.

Local organisation and volunteer network representatives noted that social media platforms enabled them access to engage in policy and programme discussions. However, they also noted challenges posed by this medium including keeping formal records.

www.humanitarianadvisorygroup.org/wp-content/uploads/2019/03/HH_Sulawesi-Practice-Paper-4__FINAL_electronic_200319_v1.pdf

*Using mobile phones to collect and disseminate web based information.* ***Source:*** *Build Change*

## Case Study
### Puerto Rico: more than a million people access vital information via startup news site

The "Information as Aid" Puerto Rico Facebook page was the fastest growing Facebook page in history, gaining 1.3 million users. As of March 2018, user numbers remain consistent at over 1 million, indicating a stable community and major continuing impact.

"Information as Aid" publishes a variety of recovery news and information on a dedicated Facebook page, which became a primary platform for more than a third of Puerto Rico's 3 million residents. The unique service connects affected communities with responding organisations and volunteers, and provides a platform and amplification for the voices of affected community members.

Journalist Justin Auciello, who helped develop the project, says the "Information as Aid" Puerto Rico news feed provides more than just vital information, it is also intended to instill some hope and inspiration for the millions of locals still figuring out their next steps post-Maria. For success, he recommends a balanced approach of hard news, soft news, actionable journalism, and some inspirational examples of recovery. The growing audience for his page suggests this formula is a successful and needed effort.

Support was provided by Facebook, Internews, Nethope and ActionSprout.

www.internews.org/story/recovery-post-maria-puerto-rico

## 6.5 Social media

### Case Study
### Phones and communication via the diaspora, Puerto Rico

One of the best ways for people in Puerto Rico to get information about their specific situations was from the massive diaspora community in the U.S. An example is Angie Lamoli Silvestry, who is originally from Cabo Rojo, but now lives in New Orleans, where she experienced Hurricane Katrina more than a decade ago. Silvestry has been using that disaster experience to share tips and information with her relatives on the island, researching recovery assistance online, and relaying that information as best she can back to her family in Cabo Rojo. She says she is also trying to help counterbalance rumours her family is hearing.

www.internews.org/story/palante-assessment-information-needs-puerto-rico-after-hurricane-maria

*Village committee meeting.*
***Source:*** *UN-Habitat.*

# CHAPTER 7
# Community-based outreach, mobilisation and engagement

Community-based outreach, mobilisation and engagement encompasses a wide range of activities that aim to ensure access for communities to information, advice, demonstration, facilitation and other support within their own homes, neighbourhoods, villages and towns. Community-based outreach may be convened at a fixed base, such as resource centre, or may be mobile, such as door-to-door advice, according to the type of activities, profiles and numbers of participants. Community-based communication differs from mass communication in terms of medium used. Community-based activities refer to communication in-person and through events, displays and buildings located in the community. Community-based outreach involves extensive social mobilisation and engagement and requires social personnel along with technical personnel in the planning and implementation of all activities.

Community-based technical assistance facilitates the communication and adaptation of policies and standards on behalf of authorities, and just as importantly, is used to collect and convey community questions, concerns, priorities, requests, suggestions and *modus operandi* to authorities to inform policy development, standards, information campaigns and other activities.

*Using local meeting place under a tree for recovery discussions. Liberia.*
**Source:** *IFRC.*

*Providing posters and examples at government recovery events.*
**Source:** *ILO.*

## Why does it matter?

Context matters. Policies, standards, and activities all need to be tested for applicability and frequently adapted to local conditions. Information may need to be communicated in local languages. Training needs to incorporate local examples for explanation. Broad and generic policies and tools need to be customised through technical assistance activities detailed and delivered within communities. Housing recovery is a dynamic process. Technical assistance needs to respond to emerging priorities, preferences and information needs through agile local programming.

Community-based activities represent experiential learning and highly effective means of communication. Participating in local events, raising questions, and in-person advice promote information retention, compared to other communication methods. Demonstration buildings and other tangible, accessible records remain as reminders and references for the longer term.

A key aim of technical assistance is to harness the capacity of all stakeholders. Community-based activities engage local stakeholders, including local authorities, local NGOs and civil society organisations, and local construction sector actors. Their participation in technical assistance increases effectiveness in recovery and the prospects for sustainability.

Community-based activities are predominantly community staffed. Resources invested in community-based technical assistance enables community members to lead and support their own communities, define their own priorities, build capacity and build resilience.

Selective community-based technical assistance can result in fragmentation and concentrated resources. Organisations may target individual project areas, leaving large gaps and other communities without assistance. Community activities can be expensive and slow. Options for more cost-effective and strategic use of resources

include mobile assistance, rotating assistance and shared personnel between programmes.

Technical assistance has to balance the necessity to reach households directly and effectively through community-based activities with the optimisation of other channels and approaches including mass communication media. Technical assistance also has to balance the challenge of coverage with aspirations of community-based approaches. Community-based approaches invoke the accompaniment principle, supporting disaster-affected communities according to their needs, at their own pace, for as long as it takes to recover.

Post-disaster recovery may not be conducive to idealised best practice planning and implementation of all community development principles. If resources, capacity, time and political support are limited, technical assistance stakeholders have to be realistic about what is achievable rather than setting ambitious targets and objectives which cannot be met.

*Steel fixer on demonstration house roof.*
**Source:** *J/P HRO.*

# Strategy for community-based outreach, mobilisation, and engagement

## Assess damage and losses, capacity and needs:

- Assess pre- and post-disaster capacity of local government premises, staff, operations, programmes and activities.
- Assess pre- and post-disaster capacity of non-government organisations premises, staff, operations, programmes and activities.
- Assess requirements for restoration or expansion of local government capacity.
- Assess requirements for restoration or expansion of non-government organisations capacity.
- Assess pre- and post-disaster capacity of local construction sector (markets, producers, vendors, professionals).
- Assess requirements for restoration or expansion of local construction sector capacity.
- Profile household and community structures and dynamics.
- Assess household and community coping capacities, including economic recovery capacity and social organisation capacity.
- Identify and profile potential vulnerable individuals and groups.

## Develop a sequenced plan based on actual resources:

### Based on the above assessments develop sequenced plans to:

- Mobilise local government stakeholders and resources (including national recovery authority and line department stakeholders) in relation to community-based outreach.
- Mobilise non-government organisation stakeholders and resources in relation to community-based outreach.
- Define institutional leadership and coordination mechanisms at national and local level.
- Define field outreach strategy for social engagement, representation, mobilization and accountability in recovery.
- Define community-based outreach strategy for the promotion of technical assistance.
- Restore local government and non-government organisation capacity. Expand capacity including temporary capacity to support recovery.
- Recruit and train new government and non-government personnel and upskill existing personnel to plan and implement community-based outreach activities.

### Establish systems for coordination, information management, monitoring and evaluation

### Information management systems to support data on and analysis of:

- Community-based outreach providers, organisation details, locations, programmes and budgets
- Policies, standards, curricula and guidance for community-based outreach activities
- Completed community-based outreach activities, outputs and results
- Upcoming and proposed community-based outreach activities
- Field outreach activity participants
- Field outreach activity costs and funding

### Monitoring and evaluation to support:

- Monitor capacity, coverage and gaps of community-based outreach providers and activities.
- Monitor participation in field outreach activities and factors in non-participation or exclusion.
- Monitor profiles of participants in community-based outreach activities.
- Monitor information needs of various constituencies and on various issues.
- Monitor barriers to local recovery progress to feedback to policy development, including institutional, technical, social and economic factors.
- Evaluate impact of community-based outreach activities, including application of information in relation to compliance with building standards.
- Evaluate cost-effectiveness of community-based outreach activities.
- Evaluate institutionalisation of community-based outreach policies, procedures and activities in support of disaster risk management (preparedness, response, recovery, risk reduction).
- Evaluate lessons learned for community-based outreach in future disaster recovery.

*Girls playing flood game.* **Source:** *UN-Habitat.*

*Engineer providing on-site advice.*
**Source:** *UN-Habitat.*

## Risks and challenges

### Location and conditions:

Access and circulation difficulties due to remote, unsafe, or insecure locations, dispersed populations or poor infrastructure may present logistical and financial barriers or constraints for field activities.

It is difficult to recruit and retain programme personnel in challenging or remote locations with limited facilities. Personnel deployed to remote locations may be isolated from supervision, support, training and exchange opportunities.

Areas categorised as heavily damaged may have different status to those categorised as lightly damaged and receive less funding and assistance, irrespective of exposure to risk, vulnerability and other measures of need.

### Expectations and reality:

The need for technical assistance is generally larger than the financial and human resources available, requiring compromises on the extent and level of assistance that can be feasibly provided. Ideally such compromises or reality checks are made collectively or based on common criteria to secure a minimum level of assistance

to all. In practice, many areas and communities have no access to outreach assistance.

Uncertainty about resources and associated timing, terms and conditions is a challenge for planning all assistance activities but particularly affects fieldwork which involves extensive logistical and staff preparation, engagement with and commitments to communities and may involve lengthy authorisation processes. Limited resources and uncertainty both contribute to organisations opting to concentrate field operations in small areas and targeted communities.

Authorities and assistance organisations may set out high aspirations and expectations to implement integrated, community-based recovery, seeking to redress a wide range of development deficits and ensure long-term resilience. Such ambitions risk being supply-driven based on the priorities of implementing agencies rather than the wider needs of the affected population. There is a risk that participatory processes and social mobilization activities are seen as a general good and not subjected to value for money scrutiny or improved and refined over the course of a programme.

Communities may also have high expectations of funding and other support, due to media reporting, promises by authorities or other actors, or due to high levels of assistance visible in the emergency response. Communities may have difficulty re-calibrating their expectations for recovery.

People may start housing repairs and reconstruction as early as they have means to do so, pre-empting official policies, standards and assistance programmes. Authorities and organisations arriving late with technical advice and assistance conditional on compliance risk meeting community frustration or rejection.

*Engineer explains poster on site to help reconstruction.* **Source:** *Vero Wijaya/ UN-Habitat.*

## Community participation and inclusion:

All community members face competing demands on their time and face challenges to participate in outreach activities, particularly when they involve travel. Questions of remuneration for community organisation roles and responsibilities need to be considered. Household and community structures may determine appropriate engagement strategies. Women, elderly, those with limited mobility, those with livelihood commitments, and young people may face different challenges to participate.

Minority or vulnerable individuals, households and groups may be disadvantaged by existing community structures. Recognising and building on existing community organisation risks formalising exclusion. Existing community dynamics may include relationships in conflict or tension which may be exacerbated through recovery assistance activities.

Organisations with pre-disaster presence in the community may be implicated in local power structures. New organisations may face challenges to establish capacity and understanding of the community. Both may face different constraints in ensuring credibility and trust with the community and ensuring accountability in collective action.

Individualised programmes do not generate community action. Financial assistance for housing repair and reconstruction allocated formally to individual households supports individualised activity. While organisations can promote community mobilisation, without mechanisms or incentives to participate at community-level, it may be difficult to deliver collective actions, particularly in a context where households have increased demands on their own time and resources.

### Capacity and collaboration:

Field operations are likely to involve a high proportion of personnel with limited experience. Risks include inconsistent and inaccurate transmission of policy and technical information, biased or inaccurate reporting of field issues and community concerns. Promotion of inadequate technical guidance risks replication of mistakes and potentially unsafe practices.

The majority of local authorities and assistance organisations are likely to have experience in infrastructure, services such as health and education, and in community mobilisation. Engineers are likely to be familiar with supervisory rather than facilitating roles. Few personnel are likely to have expertise or experience in shelter, housing, settlement, technical training or risk reduction unless they have been involved in previous recovery programmes, and will require policy guidance, institutional arrangements, training and support.

At organisational and individual-level, government authorities, sector stakeholders and NGOs may have limited understanding of each other's mandates or experience of working in collaboration. Risks include mutual impatience, frustrations, tension, duplication or missed opportunities, all affecting their efficiency and effectiveness in supporting affected populations together.

*On-site advice to masons.*
**Source:** *Vero Wijaya/UN-Habitat.*

## Factors to consider

### Context:

The physical context affects community-based outreach activities more than any other technical assistance activities:

- Total area and population affected, high and low levels of damage, type of damage
- Settlement patterns, rural or urban, dispersed or concentrated, settlement vulnerability to hazard
- Approachable or isolated communities (including mountain and island communities)
- Access and circulation infrastructure and conditions, including after disaster damage
- Climate (including snow, rain, extreme heat or cold) affecting building seasons and access and community-based activities

Social context factors affecting community-based outreach activities include:

- Household and community structures, respective roles of men, women, young people, elderly
- Homogeneous or diverse social and cultural profiles, presence and status of minority groups
- Levels of social cohesion, tension or conflict
- Levels of social organisation, representation and participation, types and roles of community organisation
- Land and property status, owners, tenants, squatters, recent or historic development
- Levels of economic development, livelihood profiles, levels of economic vulnerability
- The categorisation of levels of damage may affect area status and funding allocations with implications for assistance programmes.
- The presence and status of government facilities and services, pre-and post-disaster, and community-government relationships will affect post-disaster expectations of and engagement with central and local authorities and vice

versa. Likewise, the presence of local community organisations, national and international organisations will affect community expectations and engagement in recovery activities and prospects for long-term sustainability. For authorities and assistance organisations, pre-disaster knowledge of the community, employment of community members and involvement in programmes provides a foundation on which to build recovery support activities. Government and assistance organisations may have experienced damages to premises, loss of personnel and other disaster impacts and may be initially preoccupied with emergency response.

- The pre-disaster regulatory environment including compliance with land use plans and building codes, certification of construction actors, and quality assurance of materials may inform post-disaster efforts to promote and enforce mandatory or advisory standards and guidance.
- Pre-disaster efforts by authorities or assistance agencies supporting community-based disaster risk management, risk assessment, preparedness, risk mitigation and reduction may have affected the impact of the disaster and may inform post-disaster efforts to manage risk.
- The community's experience of disaster, particularly in recent and living memory, will be a key factor in individual, household and collective decision making. Communities exposed to frequent and recurring disasters may approach recovery differently to those who have experienced a single unprecedented event.

## Planning and implementing technical assistance activities:

Assume planning for community-based outreach activities, including coverage and allocation of resources, require continuous adjustment. Availability of resources will be clarified incrementally. Housing recovery progress and needs for technical assistance will be revealed incrementally. Technical assistance capacity, including for community-based outreach, will be developed incrementally.

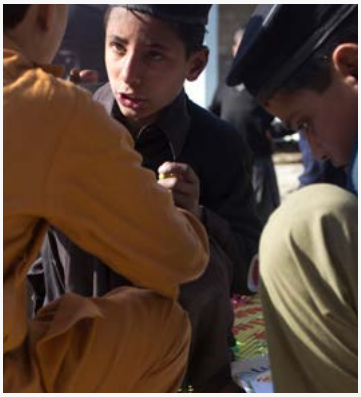
Planning for community-based outreach may be based on full coverage of all affected areas with minimal assistance followed by greater levels of assistance, or may be based on initial coverage of priority or feasible areas followed by extension to full coverage of all affected areas, or combinations of both approaches. Technical assistance stakeholders share responsibility to meet the information needs of all affected communities across all affected areas.

Community organisation activities should start as early as possible to help people prepare for reconstruction and to capitalise on early concern for safer construction. Early community organisation should help establish trust and a better working relationship between the reconstruction agency, implementing partners and affected communities. Delays in engagement will leave a vacuum which may be filled with speculation, anxiety, frustration, impatience and blame. Even if plans and funding are not ready, working with the community can help ensure they do not feel abandoned or sidelined in the process. While many organisations focus on disseminating technical information, it is as important to invest in basic mobilisation activities, such as community profiling and supporting mechanisms for representation.

Building social capital through community mobilisation can cultivate collective understanding and consensus, reinforce messages, strengthen peer pressure towards compliance and promote joint efforts to sustain risk reduction.

The majority of the affected communities may not be familiar with NGOs, development sector language or systems, and may not be organized into committees with secretaries, treasurers and chairmen but may have culturally significant and effective structures of community organisation, formal and informal networks. Analyse and recognise existing community mechanisms and dynamics and consider how to optimise their capacities. Existing structures may bring

*Source: Eduardo Naranjo/CRS.*



*Boys playing flood game.*
*Source: UN-Habitat.*

potential advantages but also potential risks, and both should inform the planning of new community-based activities.

Diverse communities may require a wide range of different policies and technical guidance as well as a range of approaches to social mobilisation, community participation and outreach activities. Assistance actors require programme flexibility and appropriate skills or guidance to adapt according to local capacities, needs and preferences.

Adapt programme planning and activities according to the capacity levels of personnel. Plan for continuous development of field outreach staff as well as continuous development of activities. Investment in local capacity of programme personnel and community members should not be limited to meeting reconstruction outputs, but aim to contribute a broader range of longer-term outcomes.

Formalizing community representation in the planning, implementation, monitoring and evaluation of the recovery programmes at local, provincial and national-level is an important dimension of community organisation. Formalisation should help improve policy development, inform planning and implementation, and build trust, shared ownership and responsibility. In reconstruction, communities should advise how they can mobilize themselves and their resources and to what ends. Community representation not limited to dialogue with assistance agencies, but rather should be linked to institutional arrangements and facilitate the relationship between communities and authorities and contribute to longer-term development objectives.

Field outreach programmes can facilitate access to communities and inform discussion in-situ on priority topics for government officials, technical experts, and other decision makers. Regular and constructive exposure of high-level actors helps them to understand community perspectives and constraints and may help to reinforce transparency and accountability to affected populations.

*Village committee meeting.*
**Source:** *UN-Habitat.*

## Fixed location technical assistance

# 7.0 Technical assistance resource centres

Technical assistance resource centres can be established by a range of agencies according to common terms of reference to support coordination of stakeholders at the neighbourhood level (citizens, community leaders, organisations working on reconstruction and local authorities).

Agencies operating in housing and neighbourhood support activities for reconstruction and development should take into account the requirement to coordinate with, support, or establish community resource centres, and to carry out, or coordinate with, field-based outreach activities.

Technical assistance resource centres, housing recovery resource centres, and reconstruction resource centres can refer to premises, personnel and/or activities.

Centres to play intermediary roles between central policy makers and disaster-affected communities.

### Target audience

- Local authorities and elected officials, local technical assistance implementing agencies, local technical professionals and construction workers, local construction sector stakeholders, local communities and households.

### Preconditions

- Resource centres require premises, or access to premises, to accommodate activities listed below.
- Defined terms of reference clarify institutional arrangements, roles and responsibilities, along with the scope of activities, to ensure consistency where multiple centres are to be established and where multiple stakeholders are involved in the operation of centres.
- The distribution or locations of centres and confirmation of their catchment areas may be planned at the outset or clarified progressively.



### Objectives

- Provide a base (a physical space) to support community-based technical assistance outreach activities.
- Provide a focal point for coordination of partners and activities and to facilitate public to access information.
- Accommodate technical assistance activities including demonstrations, trainings and meetings.

### Specification

**Establish premises and operational capacity:**

- **Establish premises:** existing buildings, rental buildings, temporary structures, outdoor space; premises may need rehabilitation or new construction. Premises may constitute core facilities supplemented by the use of other accommodation as required for activities. Secure outdoor space may be required for construction training, demonstration buildings and activities, material and equipment storage, as well as vehicle parking.
- **Equip premises:** install or upgrade services including electricity, water, sanitation, information and communications technologies to support centre operations; provide computer equipment, furniture and fittings according to the planned level of staffing and activities.
- **Establish personnel:** recruit, mobilise, train and deploy staff for coordination, information management, technical assistance training, awareness, communications, monitoring and evaluation activities and for administrative and logistical support; personnel may operate at the centre or may be operate in a

## Specification

mobile capacity. Personnel may be seconded from existing authorities and/or from partner organisations.

### Scope of activities:

Facilitate coordination:

- Coordination aims to mobilise all potential stakeholders and resources, and collectively develop and implement efficient and effective technical assistance activities with maximum coverage of the centre's catchment area. Coordination may involve the preparation of capacity and needs assessments, area plans, short and longer-term plans, setting targets, tracking resources and joint reporting.
- Government: coordination with provincial, district and municipal authorities and local elected representatives, as well as institutional leads for humanitarian shelter and housing recovery, including technical leads for policies, standards, training and information management.
- Non-government technical assistance agencies: coordination with humanitarian and development organisations, training providers, and technical and academic institutions to facilitate planning, implementation, monitoring, and reporting of technical assistance activities and reconstruction progress.
- Housing sector stakeholders: coordination with local technical professionals, construction workers, building material producers and vendors, financial service providers, local media and other stakeholders to develop and implement technical assistance activities and to monitor housing recovery progress.

Act as intermediary between central-level and community-level:

- Central recovery authorities cannot interact directly with all communities and vice versa. Intermediate-level technical assistance resource centres aim to facilitate timely and streamlined communication between the national policy level and the local implementation level. Decentralised institutional arrangements facilitate local prioritisation and adaptation.
- Provide information from the central-level: provide timely and accurate policy updates, information on institutional arrangements, regulations, standards and guidance, information on programmes, and assistance to recovery stakeholders operating at the local level.
- Provide information from the community-level: collect data and provide analysis to local and central-level recovery authorities to inform decision making; collection may include qualitative and quantitative data on disaster impacts, shelter situation, recovery intentions, priorities and challenges, rate of reconstruction and compliance, policy impacts, technical guidance and information needs, technical assistance capacity, and coverage. Standardised information management systems may support reporting.
- Facilitate linkages: facilitate access to information on, and coordination with, initiatives on recovery including land and property issues, risk mapping, community planning, infrastructure recovery, risk reduction and management, social and community development, and livelihood and economic recovery.

Facilitating technical assistance activities:

- Technical assistance activities may be implemented directly by resource centre personnel, or implemented by government, non-government or housing sector partners at the centre or at other locations in the catchment. Activities may be organised by the centre as pilots for replication, capacity building, discussion and feedback opportunities, or as technical assistance of last resort to cover gaps in the assistance.

# 7.0 Technical assistance resource centres

## Specification

- **Disseminate information:** act as a hub to demonstrate and display information, distribute printed communication materials, and provide communication materials to technical assistance agencies and construction sector stakeholders; provide information to media and promote local broadcasting of information; communicate through social media and other channels; communicate policies, technical guidance, and information on local activities
- **Provide advice:** respond to requests for information and advice through drop-in services and organised information sessions at the centre and in the catchment area; record and report information requests and frequently asked questions; provide legal or grievance redressal advice and referral services.
- **Build capacity of implementing agencies:** facilitate training, mentoring, advice and resource information to government authorities and non-government agencies implementing technical assistance
- **Build capacity of local construction sector:** facilitate training, mentoring, advice and resource information to local construction professionals, contractors, construction workers, material producers and vendors
- **Support implementation of technical assistance activities:** provide technical and promotional support to a range of activities at the technical resource centre or in the catchment area, including model house construction and events, community orientation sessions, and focus group discussions by both technical assistance agencies and construction sector stakeholders

Monitoring, evaluation, reporting:

- Monitoring and evaluation aims to identify housing recovery needs in order to inform technical assistance planning and to track the coverage and impact of implemented technical assistance activities.
- **Monitor housing recovery progress:** monitor local housing sector indicators (housing typologies, construction typologies, construction costs, rental costs, sources of finance, labour, materials, etc.), the quantity and distribution of local construction activity (repairs, reconstruction, new construction, extensions, costs, etc.), as well as the quality of local construction activity (materials, workmanship, defects, etc.).
- **Monitor technical assistance:** monitor and report the coverage and quality of technical assistance activities (e.g. training, awareness, demonstration); establish baseline data knowledge, attitudes, and practices data; monitor and evaluate the impacts of technical assistance activities; collect feedback on technical assistance activities, identify information needs.

## Related activities

- Fixed display, demonstration construction, and model house construction may all be located at technical resource centres.
- In-community and mobile technical assistance activities may also take place at technical resource centres. Activities may include community planning, orientation sessions, focus group discussions, building material producer and vendor sessions, engaging children and youth, supporting housing groups for collective construction, promoting household safety and environmental audits, promoting disaster preparedness planning, supporting technical advice clinics, and facilitating community exchange visits.

## Benefits/challenges

Centres provide a focal location to promote timely and accurate recovery guidance information for various local authorities, implementing agencies, construction sector stakeholders, and communities. Simplified access to information mitigates confusion.

Centres provide a mandated platform to coordinate local technical assistance actors and activities, and to optimise resources and coverage.

Existing government or non-government premises may be destroyed or damaged and require extensive rehabilitation.

## 7.0 Technical assistance resource centres

Space or access may be limited in existing premises. Appropriate alternative premises may not be available or affordable.

Rehabilitating existing premises, establishing new permanent or temporary premises, and/or equipping premises may take considerable time, resources, administration, and project management.

Remote locations may not have feasible access to communications infrastructure.

Premises and funding constraints may limit options for resource centre staffing, operations, and technical assistance activities.

Skilled and experienced personnel may not be available or willing to deploy to remote locations. Personnel capacity can be built through training and other supports, which need to be planned for.

Using existing government premises as locations for technical assistance centres and services can optimise existing infrastructure, facilitate coordination with, and ownership by, authorities, and may be a familiar location for information services.

In some contexts, there are disadvantages to operating from government premises, including if public access is limited or issues pertaining to the legality of property status are cause for tensions between government and communities. Tensions between government authorities and non-governmental technical assistance actors may also inform decisions to operate on government premises or autonomously.

Both government and non-government-operated technical assistance centres may be event specific or recovery focused and face challenges to transfer data and capacity to durable institutions or to otherwise ensure sustainable promotion of better housing.

Centres may have limited reach to catchment areas and populations and limited impact on recovery unless associated outreach strategies are implemented.

Centres require adequate staffing and continuous engagement with recovery decision-makers at central level in order to effectively disseminate evolving policies and guidance and effectively communicate analysis of recovery progress and concerns.

### Case Study
### Community Support Centres for House Repairs (CARMENs), Haiti 2010

Families are the main players in the repair and reconstruction of their homes. To reinforce this process, UNDP set up Community Support Centres for House Repairs (Centres d'Appui pour le Renforcement des Maisons Endommagées), known as CARMENs. These community resource centres served as information sources for the population as well as platforms for meetings and exchanges with various experts in the construction and land tenure sectors, and meeting points for the community and stakeholders working in the area. Training sessions relative to earthquake-resistant building practices and legal support were also organised in the CARMENs. The centres contributed to the improvement of the processes of repair, construction, and demolition by and for the communities themselves. A total of five centres were opened in Fort National, Canapé Vert, Carrefour Feuilles, Delmas 75 neighbourhoods in Port-au-Prince, and Léogâne, and each operated for 18 months. During this same period, the CARMEN teams liaised with engineers who evaluated 10,000 damaged houses to ensure the application of earthquake-resistant standards to the repairs.

*Housing damage after the 2010 earthquake Port au Prince Haiti.* **Source:** *UN-Habitat.*

Similar centres were established and operated in additional neighbourhoods by GRET, Architecture for Humanity, CORDAID, IOM, Habitat for Humanity, and UN-Habitat.

www.undp.org/content/dam/undp/library/crisis%20prevention/disaster/latin_america/UNDP-HAT-CPR-2yearsafter.pdf

# Fixed location technical assistance

## 7.1 Fixed display information

Technical resource centres, technical assistance programme offices, local authorities and other housing recovery stakeholders may provide fixed public display areas to present print and graphic information. The display may be permanent or temporary for the duration of the recovery programmes or activities. Information should be updated regularly to include new policy and technical guidance. Information may be fixed directly to walls, pinned to boards, laminated, glazed, or be movable to use in different locations. Display information should target a maximum audience, through positioning in public areas, and if possible making information visible outside business hours and to passers-by.

### Target audience

- Government and non-government personnel involved in technical assistance activities, visitors to the centre including participants in training and other activities, and the general public.

### Preconditions

Display information is managed by the technical assistance resource centre. Responsibility for providing, editing and maintaining content should be clarified, including managing information contributed by various sources.

### Objectives

- Increase the visibility of recovery programmes and actors.
- Promote and provide focal location access to authorised policy and technical information.
- Increase awareness of available information, assistance, agencies operating, and activities that are both planned and underway.
- Promote participation in technical assistance activities through announcing upcoming events.

### Specification

**Fixed display may include the following:**

- Policy and programme announcements by authorities
- Samples of standardised government approved technical guidance (flyers may also be available to take away for reference)
- Programmes (calendar and location) of local events, training and awareness activities
- Contacts and sources for further reference and information, including assistance
- Reports on completed technical assistance activities
- Reports on reconstruction progress, rates of completion and compliance, funding, and analysis of challenges
- White board for quick and informal updating and messages

### Related activities

- Technical assistance resource centre operations
- Preparation of printed materials

### Benefits/challenges

Fixed display can promote local events and information, increasing the role of the technical assistance resource centre as a hub in the community.

Displayed information can be accessible to more people and kept safe for reference compared to distributed materials or broadcasted content.

Display can promote printed materials available for assistance agencies or communities to obtain on request.

Reconstruction progress, rates of compliance, funding and other information may be displayed to support transparency and accountability.

Noticeboards provide opportunities to acknowledge the efforts and achievements of personnel and partners.

Text-based materials may need translation to local languages.

Information may not be well-maintained or kept up-to-date and needs dedicated attention to optimise the display.

## Case Study
### Wall painting in Haiti

Haiti has a rich and live tradition of hand painted walls and signs. After the earthquake, local artists were employed to replicate technical guidance posters on walls in prominent locations in informal neighbourhoods, where people were reminded daily of key messages such as the correct mix of ingredients for concrete. The photographs above show the original poster and a typical wall six years after it was painted along a busy pedestrian route.


*Source: UN-Habitat*

## Case Study
### Red Crescent noticeboard, Bangladesh 2018


*Public notice boards ensure people can access timely information, the same information, and local-specific information while providing locations for people to discuss. Source: IFRC.*

# 7.2 Demonstration construction models, information and activities

Technical resource centres and other housing recovery stakeholder premises may accommodate demonstration and model construction information. Demonstration and model construction differ from full model house construction insofar as they include examples of loose materials, unfinished (skeletal) construction, and other building components to maximise communication whereas model houses are normally completed, weatherproofed and (possibly) occupied buildings. Model information may be full-size or scaled down to illustrate structural principles. Models may be portable to guide replication on site (such as carpentry joints or steel connections).

Demonstration activities, such as concrete mixing or concrete slump testing, may be carried out in association with demonstration construction models to support training and awareness events.

## Target audience

- Government and non-government personnel involved in technical assistance activities, visitors to the centre including participants in training and other activities, construction professionals and workers, as well as the general public.

## Preconditions

- Demonstration construction models, information, and activities require appropriate premises, which often includes secure outside space. Accommodation may be needed only for a short duration or may be required for protracted display. Responsibility for maintenance and the duration of display should be clarified.
- Specifications for demonstration models, information, and activities should be in accordance with official technical standards validation processes.

## Objectives

- Promote construction information in an accessible, practical way to facilitate the correct application of standards and guidance
- Increase resource and reference materials available including for local training and awareness activities
- Ensure technical guidance is based on local conditions, preferences and priorities
- Increase understanding of reconstruction costs, and of reconstruction challenges and information needs through collection of feedback from participants in demonstration events and from resource centre visitors

## Specification

**Demonstration materials, components and construction models for display:**

- Examples to demonstrate specifications and standards, illustrate quality assurance criteria, and promote hazard resistant and building performance improvement measures (re: earthquake, flood, hurricane, severe cold and heat)
- Examples may include the following:
  - **Materials:** examples of good and bad quality construction materials, including explanations of criteria and simple tests for correct selection, storage and use (e.g.: sand, gravel, stones, bricks, blocks, steel, timber); examples of new materials or new use of materials (e.g.: galvanised wire mesh or PPP bands for retrofitting masonry)
  - **Steelwork/Reinforcement:** examples of correct steel detailing, presented in either full size or scaled down details, showing correct connections and fabrication (foundations, anchorage, columns, beams and bands, framing of openings, sizes, spacings, rings and hooks, laps and splices); steel reinforcement should include vertical and horizontal extensions to the building; steel models should have key details at full size (e.g.: the frame may be full size or scaled); frames may be fully exposed or with part concrete cover

## 7.2 Demonstration construction models, information and activities

### Specification

- **Masonry:** examples of stone, brick or block masonry to show quality assurance criteria; stone masonry may include foundations, plinths, load bearing and retaining walls, stone selection, placement, quoins, through stones, bonding, mortar and pointing; brick or block masonry may include plinths and aprons, corners, openings, bonding, mortar and pointing
- **Timber or bamboo framing:** examples of structural frames to show quality assurance criteria; frames may include member sizing, material treatment, connections and joints, foundations, plinths, wall, floor and roof members, bracing, openings, enclosure, weatherproofing, and maintenance
- **Roofing:** examples of roof structures and finishes
- **Plumbing, water and sanitation:** examples of water collection and management, including rainwater harvesting, plinth protection and site drainage, water storage, cisterns and tanks, and water filtration; examples of sanitation solutions, individual and group, low and high-cost, dry and flush systems; guidance on quality assurance, operation, and maintenance
- **Electrical:** model of safe domestic installation; examples of household and community wind, solar, hydro and other technologies
- **Finishing:** examples of plastering, tiling, painting and other finishing works
- **Heating and cooking:** examples of energy and fuel-efficient heating and cooking stoves, safe and hygienic cooking facilities and practices (e.g.: food storage, preparation and cooking)
- **Retaining walls:** examples of retaining walls, basement walls and tanking, presented as either site works or building works
- **Repair and retrofitting:** examples of materials and techniques for repair and retrofitting of damaged or substandard buildings
- **Insulation:** examples of materials and techniques to improve the thermal performance of floors, walls, roofs and openings

#### Demonstration activities:

- All of the above materials, components and construction examples may be accompanied by activities for explanation and discussion.
- In addition, the following processes may be demonstrated:
  - **Soil tests:** demonstration of local soil types and their implications for foundation and building design as well as demonstration of how to carry out site bearing tests
  - **Material tests:** demonstration of simple site tests including steel tension tests, brick and block compressive strength tests
  - **Concrete:** demonstration of concreting (including information on the constituent materials, mix, placing and striking) and slump tests; information may be combined with the steel reinforcement or collected separately
  - **Services:** demonstration of the operation of rainwater harvesting, water quality testing, heating and cooking stoves; household and community water and sanitation may include promotion of associated health and hygiene information such as water treatment, handwashing, etc.
- Models and demonstrations should address the range of local construction practices and preferences. Examples include local, traditional, and conventional construction, as well as low and high-cost specifications.
- Models and demonstrations should target common construction shortcomings identified through damage assessment and other analysis, including material and workmanship quality as well as the absence of hazard-resistant detailing.

## 7.2 Demonstration construction models, information and activities

### Related activities

- Technical assistance resource centre operations including training, orientation, and other activities.
- Demonstration construction models and activities may be associated with full model house construction.

### Benefits/challenges

Demonstration models and activities provide practical, visual, and real (tangible) material information to communicate construction information more effectively than drawings.

Demonstration models and activities facilitate experiential learning, interaction and feedback.

Demonstrations increase the range of information and resource material available locally, including portable models for replication on site.

Funding for materials and labour may be considerable. Models and activities may be supported by local construction sector stakeholders including vendors, producers and contractors, increasing the hub role of the technical resource centre.

Models and activities require technical knowledge and adequate skills to communicate standards accurately.

Models need maintenance to mitigate deterioration.

Demonstration models and activities need promotion to maximise participation and communication impact.

### Case Study
### Shelter Cluster/International Organisation for Migration (IOM) Dominica: strengthening roofs in reconstruction after Caribbean hurricane

In September 2017, Dominica, a small island in the Caribbean was devastated by Hurricane Maria. Almost 6,000 houses were destroyed and over 17,000 seriously damaged. Guidance for building back safer was issued in the form of 8 build back safer key messages in poster format starting October 2017, followed by training and demonstrations.

As strengthening and securing roofs are a priority in hurricane-prone areas, full-size roof structure models were developed to inform officials, construction workers, and households on how to implement roof fixing measures, in addition to posters and other information materials. The models were fixed on wheels to be moved for various training and outreach events.

*Mobile full-scale model of hurricane-resistant roof construction. Dominica 2017.* **Source:** *Dave Haption/IOM.*

www.sheltercluster.org/sites/default/files/docs/8_key_messages_posters_proposal.pdf

## Case Study
### Full-size partial model showing steel fixing details for confined masonry standards, Pakistan 2005

The model was constructed to communicate steel foundation details, and horizontal and vertical reinforcement and junctions details. Using full-size components illustrates the diameter of each steel member, the correct spacing between rings, and other quality assurance criteria difficult to represent on scaled models.

Steel detailing is complex to communicate through drawings or even photographs, and completed model houses require the steel to be covered with concrete, rendering the fixing details no longer visible. The model was constructed on local government premises and maintained by technical assistance teams. It was used for training and information sessions

*Source: UN-Habitat.*

# 7.3 Model houses/ demonstration houses

A model house or demonstration house refers to the full completed construction of a house in accordance with technical standards. A model house differs from demonstration construction or models, which refer to building components or partial construction to communicate construction information.

The construction of a model house may be located at a technical resource centre or may be located elsewhere in the catchment area. A model house may be implemented by any of the technical assistance stakeholders operational in the area or by private owners.

Model houses provide opportunities for construction training, awareness activities and events, documentation and feedback as well as durable long-term reference. Model houses may communicate a wide range of information including hazard resistance measures, material and workmanship quality, and environmentally sustainable household water and sanitation under local conditions. Training and promotional activities require time, human and financial resources over and above the construction requirements.

## Target audience

- Households and communities (learning through observation and events), construction professionals and workers (trained while building the house as well as through observation and events), technical assistance programme personnel, and the general public.

## Preconditions

- Logistical and administrative issues should be confirmed in advance. These include ownership and status of the house, timing and duration of construction, access to the site during and after construction, and the scope of associated activities including training, promotional events and documentation.
- Agreements on terms and conditions are needed between the property owner/house occupant and assistance agencies on respective roles and responsibilities, and on resource requirements and commitments (funds, materials, labour).
- Specifications for model houses should be in accordance with official technical standards validation processes.

## Objectives

- Promote construction information in an accessible and practical way to facilitate correct application of standards
- Test and confirm technical solutions under local conditions, including sites, materials, skills and cost
- Ensure technical guidance is based on local housing preferences
- Facilitate discussion and collection of feedback on housing construction issues
- Facilitate supervised practical training opportunities under quality-controlled conditions
- Promote peer-to-peer communication between construction workers, including those involved in model house construction
- Increase resource materials for training and awareness activities through documentation of model house construction
- Increase understanding of reconstruction challenges and information needs through collection of feedback from construction and event participants
- Provide a focus for awareness activities and durable, long-term reference to continue promotion of improved construction

## 7.3 Model houses/demonstration houses

### Specification

- Location and site: visible and accessible location; site typical of local conditions
- Design and specification: model house design and specification should be selected according to standards validated by the government that demonstrates; 1) construction quality, 2) hazard-resistant design and detailing, 3) household services and building performance, 4) site works. Model houses should be consistent with prevailing or expected local housing and construction typologies and preferences, incorporating improvements as required. Model houses provide research opportunities to test and evaluate technical options.
- A model house may be a basic, small, or a core house allowing for extension or a larger aspirational house. A range of model houses may be required to communicate a range of standards and specifications. Model house designs, specifications, bills of quantities, step-by-step guidance, and schedules of costs constitute key information to support programme activities. The model house provides opportunities to test and confirm technical specifications including site, structural, services and others.
- Construction: whenever possible, materials and labour should be locally sourced, to operate under local conditions, support the local economy and engage local construction stakeholders. Adequate skilled labour will be required to assure construction quality and adherence to standards. The construction site should demonstrate guidance for setting out, site preparation, storage and preparation of materials and equipment, and site safety measures. Construction timing and phasing should be scheduled to facilitate training and promotional events at key stages. The duration of construction is likely to take longer to accommodate the additional scope of work. The timing of model house construction needs to balance being early enough to guide reconstruction in advance, while accompanying construction when underway and responding to emerging technical issues during reconstruction.
- Training: model houses are constructed to required standards, under supervised and guided conditions, generating a range of potential training opportunities. Unskilled construction workers may acquire skills on the job. Construction professionals and skilled workers may participate in construction of the building or may participate in topic-specific training, demonstration, and discussion events at key stages. Personnel involved in recovery may learn both construction information and the communication of construction information through participation in model house related activities.
- Promotional activities and events: model houses provide a focal point to communicate technical standards and complex construction information in an accessible and experiential way. Promotional events should be planned at key stages in construction. Events may be organised to engage different target audiences (construction workers, women, households carrying out repairs) or to engage the wider public. Model house awareness events may be supported by display information, demonstrations on site and by printed reference materials to take away. Permanent signage may be erected for continued reference after the duration of recovery programmes. The locations and details of all model houses should be mapped and available to all housing recovery stakeholders.
- Feedback: model houses provide content and opportunities to facilitate discussion and feedback. The collection and analysis of questions, observations and comments by participants in construction, training and promotional events, and by visitors to the site, can inform housing recovery policies and the planning and implementation of technical assistance activities. Feedback needs to be solicited and reported systematically.
- Documentation: model houses provide content for the development of printed communication materials, training curricula and other technical assistance activities. Data may include drawings, specifications, cost information, photographs of step-by-step construction and construction details, frequently asked questions, and responses.

## 7.3 Model houses/demonstration houses

### Specification

- Access and use: access to the site and building during and after the construction period, for promotional events and for visitors' needs must be agreed to where the model house is private property. Agreements between the owner and technical assistance agency should cover the full scope of work and respective responsibilities.
- Repair and retrofitting: model or demonstration construction of repair and retrofitting measures may be carried out on existing buildings with typical patterns of damage or vulnerability, or on parts of existing buildings.

### Related activities

- Demonstration models and activities in association with the full model house construction
- Training of construction workers (masons, carpenters, steel fixers) and contractors
- Training of construction professionals and recovery programme personnel
- Development of content for audio, visual, and printed communication materials
- Community orientation activities, focus group discussions, media and other target group engagement events in association with model house construction

### Benefits/challenges

Model houses provide a focus to generate local interest. Associated activities facilitate experiential learning, interaction and feedback.

Model houses communicate complex construction information more practically, comprehensively, and effectively than drawings or other communication methods.

Model houses can incorporate a wide range of information, including all stages of construction, specifications and workmanship, services and performance, time and costs, in an integrated way.

Fully built houses provide durable local reference for the future. The information value is increased through ensuring associated documentation remains available.

Investment in model house construction can yield multiple outputs including trained masons, documentation for communication materials, and informed communities.

Technical oversight is required to ensure the design, specification, and construction is carried out correctly and in compliance with all relevant standards and is appropriate to local preferences.

Significant financial and human resource investments are required depending on the construction cost, the familiarity of technology or construction skills required, and on the scope of promotional activities.

Weak promotion through training and awareness activities may result in substandard or limited replication.

Inappropriate designs or technologies are not likely to be replicated.

## Case Study
### Demonstration House Dir Pakistan, flood and earthquake area

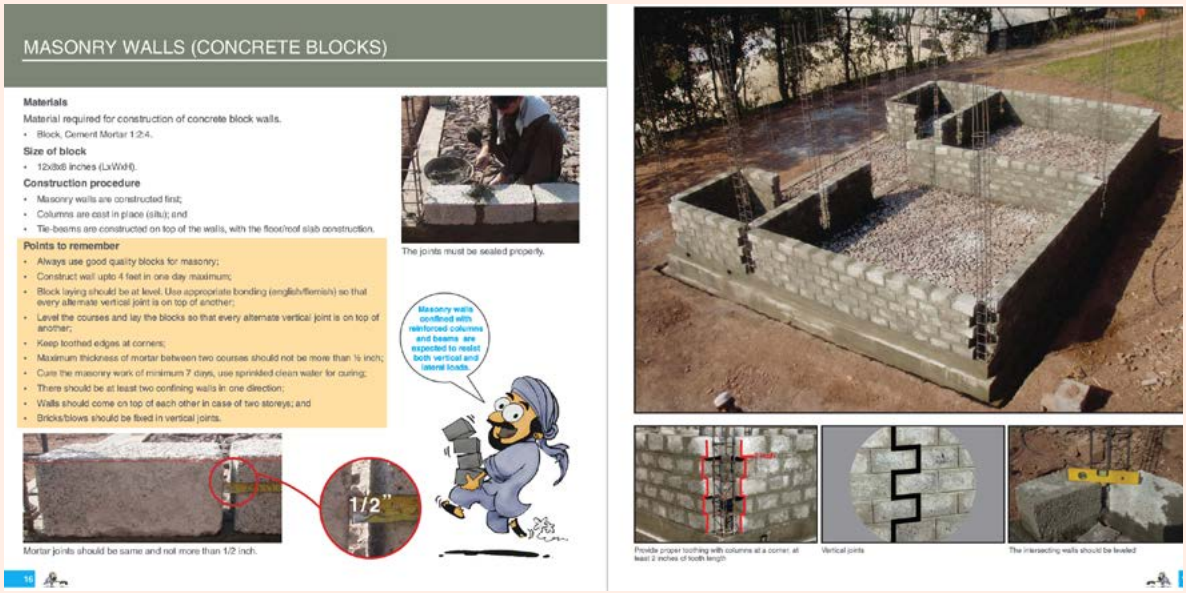
A timber-reinforced stone masonry demonstration house was built in a remote area after flooding in 2011 using only the local materials, skills, and tools available. The house reflects local typologies including layout, window sizes, and other features. Twenty skilled masons and twenty apprentices were trained in construction on the site and villagers visited every week to see stages progress. The house regenerates local knowledge of earthquake-resistant knowledge known locally as Bhatar construction. Similar techniques are common from Turkey to Nepal, each adapted according to local materials available, and to climate and socio-cultural contexts.




*Source:* *UN-Habitat*

## Case Study
### Visit to a demonstration of retrofitting on an existing house

Women visiting a demonstration house where retrofitting work has been carried out to strengthen the walls. Events on site provide opportunities for the visitors to ask questions of the engineers and masons who carried out the work, on technical, cost, and other issues. Retrofitting was carried out on a typical existing house to provide information that would be directly applicable for most other houses in the vicinity.




*Extract from information materials, using step-by-step photographs of model house construction.* **Source:** *UN-Habitat*

## Case Study
### Model house used to generate data for training and information materials

A confined masonry using concrete blockwork was constructed with each stage and several construction details documented for the preparation of a range of training curricula and information materials. The documentation required intensive time commitment. The house above was documented by the site engineer, requiring tidying the site and taking a series of photographs from fixed positions, as well as working out how to photograph key construction processes. The model house was also used for several community events at each stage, recording over 1,000 visitors during construction.

**In-community technical assistance**

# 7.4 Village/neighbourhood/ community engagement and planning

Village, neighbourhood or community engagement describes the process of organising groups of households and local stakeholders to participate collectively in post-disaster housing reconstruction planning and implementation.

Community engagement may aim to inform damage assessment, emergency shelter response, housing and settlement recovery and longer-term development, and may include planning for the use of community capacities and resources or to solicit or programme assistance resources.

Mobilised communities can ensure housing technical assistance activities are more efficient and effective through the collection of information on progress and constraints, disseminating policy and standards, organising training, demonstrating buildings, and building inspection.

Community engagement may be facilitated by government authorities or by technical assistance partners, through time-bound or continuous, informal or formal activities.

The description of community engagement below is limited to the relationship with housing reconstruction activities. Wider village, neighbourhood or settlement analysis, planning, rehabilitation and development are not accounted for.

## Target audience

- Community members and community stakeholders

## Preconditions

- Communities may need to be defined geographically in advance of engagement or may be defined through the engagement and planning process.
- Processes to formalise community organisations and/or validate community plans may be defined in policies or institutional guidance.

## Objectives

- Increase community analysis of and consensus around vulnerabilities, needs and capacities, potential improvement measures, and prioritisation during a period of change
- Empower communities to lead decision making and implementation of shelter and settlement activities at all stages of recovery, from emergency to recovery to long-term development, including through access to funding
- Strengthen collaboration between communities, authorities and assistance actors
- Supplement housing reconstruction funding and activities with community or settlement funding and activities

## Specification

**Policies and institutional arrangements:**

- Community organisation criteria and terms of reference may be developed by government, technical or assistance agencies.
- Community mobilisation and planning may include (local) government authorities as stakeholders or may require data input, feedback or validation by authorities.
- Community planning methodologies, outputs, validation and implementation processes may be developed by government, technical or assistance agencies.
- Technical assistance personnel facilitating community engagement and planning should be trained or experienced in participatory assessment and planning processes, as well as recovery policies and agreed methodologies.

## 7.4 Village/neighbourhood/ community engagement and planning

### Specification

**Community engagement and planning processes may include:**

- Identification, naming, and mapping of communities, neighbourhoods, villages, and significant places, and geo-referencing
- Analysis of existing data including census and socio-economic data, infrastructure data and risk assessments
- Analysis of and engagement with existing community structures, organisations and groups
- Organising community through coordinating existing or establishing new community structures
- Capacity building of community organisations, representatives or groups
- According to timing and scope, communities undertake the following in collaboration with authorities and assistance agencies:
  - Assessments of capacities and needs
  - Development, discussion, and agreement of plans
  - Mobilisation of resources
  - Implementation of planned measures/activities and revisions to plans
  - Monitoring and reporting of community activities

**The scope of community engagement and planning may include:**

Emergency response, damage assessment, temporary shelter and services, risk mitigation, infrastructure rehabilitation or development, community facilities and services, housing repair and reconstruction, livelihood regeneration, social development, vulnerable support, settlement planning, and the resettlement of displaced households.

**Specific activities related to technical assistance for housing recovery may include:**

- Identification, documentation and analysis of affected households and target constituencies for technical assistance
- Mobilisation of local construction sector and analysis of capacity and needs (sector stakeholders include producers, vendors, transporters, technical professionals, contractors, skilled and unskilled workers)
- Identification of locations, premises, human resources, and financial and material resources for technical assistance activities
- Establishment of community organisations, housing groups or other mechanisms as per housing recovery policies, terms and conditions
- Analysis of community technical assistance requirements, including local building typologies and technologies, damage impact and construction shortcomings, reconstruction intentions and preferences, social structures, communication and information channels and needs
- Development and implementation of training and capacity building plan including community awareness, mason training, demonstration buildings, events and regular activities, locations, dates, communication, and resources
- Analysis of vulnerable households and groups, challenges in reconstruction, and options for support
- Monitoring of reconstruction progress, rate and quality of repair and reconstruction, constraints, deficiencies, and options to address them; monitoring to include qualitative and quantitative reporting

## 7.4 Village/neighbourhood/ community engagement and planning

### Specification

- Development of operation and maintenance activities, including drainage and flood defence maintenance, evacuation drills, preparedness planning, and longer-term risk management plans and activities

Community engagement and planning approaches need to take into account the settlement factors (e.g. dispersed or concentrated, rural or urban, established or recent, homogenous or diverse, etc.).

### Related activities

Village/neighbourhood/community disaster preparedness planning

### Benefits/challenges

Community engagement and planning establishes an intermediary mechanism for communication between households and authorities/assistance agencies, ensuring technical assistance activities are planned and implemented more efficiently and effectively at the policy, programme, and field level.

Community mobilisation and community-based activities build upon existing social structures and strengthen social capital through recovery.

Community mobilisation can expedite reconstruction, reducing time and cost.

Community planning can reduce settlement-related risks and institutional risk management locally with sustainable measures.

Community engagement depends on pre-existing levels of cohesion and may involve internal disputes, conflict with authorities, mitigation of existing discriminatory practices, capture of decision making by powerful members, and difficulties if community members are displaced. Additionally, community members may face difficulties to participate (women, elderly, youth, disabled, minorities).

Community engagement may require intensive and continuous inputs by authorities/assistance agencies related to skills and resources.

Households and communities may have limited time available to engage in community activities at various stages of recovery.

New technical assistance agencies or personnel may have limited time to build the trust, working relationships, and in-depth knowledge required to effectively facilitate community engagement and planning.

Community engagement and planning may be undermined by ambitious and unrealistic expectations set by assistance agencies, or by unrealistic expectations of assistance set by communities.

## Case Study
## Participatory Approach for Safe Shelter Awareness (PASSA), IFRC

The Participatory Approach for Safe Shelter Awareness (PASSA) is a method developed by the Red Cross to develop local capacity to reduce shelter-related risk by raising awareness and developing skills in joint analysis, learning, and decision-making at community level.

The method enables communities to identify their own needs, prioritize them, and develop their own solutions to address challenges, including spatial and environmental planning, and sustainable housing and construction. PASSA is also designed to foster partnerships between local authorities, communities, and supporting technical assistance agencies to prepare for, cope with, and recover from disasters.

As the PASSA approach takes a settlement view of recovery and disaster risk reduction, it can support community-level programming and inform technical assistance beyond individual housing. PASSA is particularly useful where disaster risk needs to be addressed collectively and at the settlement level, such as in areas prone to flooding, landsliding, or where environmental management may mitigate the impacts of meteorological hazards.

The PASSA method is a time-intensive process which poses challenges for all community members to fully participate, especially in the chaotic aftermath of a disaster. However, recent experience of disaster may generate increased local interest and opportunities for planning.

Assistance agencies using PASSA should be aware of government policies regarding settlement recovery, including financial assistance for community infrastructure, and should be trained in facilitation using PASSA tools. Agencies should ensure that the process does not build up expectations in communities which cannot be met, or that the process is not used to 'rubber stamp' pre-planned interventions that cannot be revised based on the community's feedback. An effective PASSA process requires the technical assistance agencies involved to be clear from the outset about what expertise they can bring, what resources they are prepared to invest, and what investment and actions will be expected from the community.

www.ifrc.org/PageFiles/95526/publications/305400-PASSA%20manual-EN-LR.pdf

*PASSA community risk analysis. Bangladesh.* **Source:** *IFRC.*

*PASSA exercise, community mapping. Bangladesh.* **Source:** *IFRC.*

*PASSA exercise. Bangladesh.* **Source:** *IFRC.*

## Case Study
### Community action planning 2005, Aceh Nias, Indonesia

In Aceh, where property records and the land administration system were severely damaged, and a large number of people do not hold registered titles to their property, participatory mapping and community action planning were critical to reconstruction. UN-Habitat promoted a community action planning approach involving a number of steps, starting with community mapping exercises to identify pre-disaster conditions to establish claims on the land. This was followed by an action-planning participatory process to formulate village plans for reconstruction of infrastructure and housing. Planning also promoted disaster risk management approaches and analysis of livelihood needs.

*Community action planning for housing and settlement reconstruction. Aceh Indonesia, 2005.* **Source:** *UN-Habitat.*

Village plans were developed by 23 communities through participatory processes, with village plans reflecting common consensus and people's priorities and needs.

Guidelines for community mapping and community action planning preparation were developed and validated, which were followed by all organisations involved in village plan formulations.

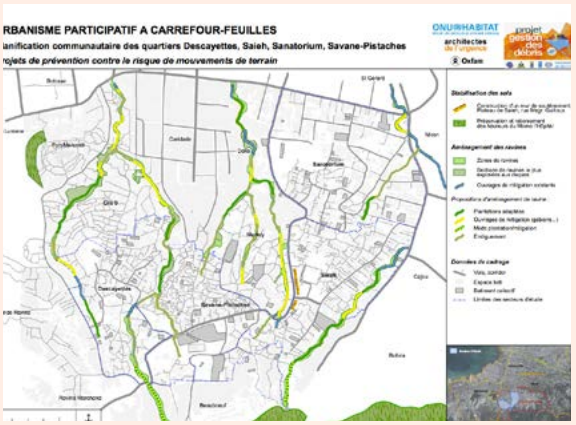
www.fukuoka.unhabitat.org/projects/indonesia/pdf/indonesia.pdf

## Case Study
### Participatory planning in informal neighbourhoods

After the 2010 Haiti earthquake, over 30 participatory recovery plans were developed in 28 informal neighbourhoods of Port-auPrince. This collective effort by the Haitian Government, 50 humanitarian and development agencies, and local and international technical professionals was a landmark case in urban technical assistance for post-disaster recovery. Lessons learned have contributed to the mainstreaming of 'area-based approaches' and urban tools by many agencies, but have also raised questions about the projectisation of recovery support and how to balance financial and technical assistance for both settlement and housing reconstruction.

*Damage in the neighbourhood of Ravine Pintade after the 2010 earthquake in Port-au-Prince.* **Source:** *Global Communities.*

*Emergency Architects. Participatory planning for recovery in informal neighbourhoods. Haiti 2010.* **Source:** *Sylvain Joachim.*




*Participatory plan for informal neighbourhood recovery. Port au Prince, 2011.* **Source:** *Emergency Architects, Oxfam, UN-Habitat.*

# 7.5 Community orientation sessions

'Orientation' sessions refer to organised events that involve the presentation, provision and discussion of basic information and guidance to groups in an effort to build awareness and sensitisation rather than detailed knowledge or skills. Community orientation sessions aim to reach large numbers of people quickly and with consistent information. They provide opportunities for collective engagement and discussion, and for people to directly receive authorised answers to various questions. Participants may be groups of households or neighbours all preparing to reconstruct their homes, or may be large and mixed groups from the same area with various interests in the recovery process.

Orientation sessions may be carried out by any of the technical support stakeholders operational in the area. Planning of orientation sessions may be coordinated by the technical assistance resource centre to optimise human resources, display and disseminate communication materials, and to ensure coverage.

## Target audience

- Orientation sessions may be for the general public/ community, or may be organised for specific groups such as women or youth (see below: focus group sessions). The location, participant numbers and mix (e.g. very small or very large numbers, and general or specific participation) may affect the dynamics of discussion.

## Preconditions

- Orientation sessions aiming to introduce recovery policies, standards and/or programmes require confirmation of related decisions.
- Standardised core content should be prepared in advance and key personnel trained in its presentation.
- Orientation sessions may represent a major strategy to disseminate printed communication materials, which need to be developed, validated, produced and prepositioned in advance.

## Objectives

- Ensure informed, effective, two-way communication reaches a maximum number of target households
- Create awareness of basic information on government policies and technical standards and guidance
- Introduce local technical support actors and activities
- Engage with communities to record, address or relay their priorities, queries and concerns as part of tracking reconstruction, and to inform policy and programme development

## Specification

**Premises:**

- Orientation sessions may be organised at government offices, technical assistance resource centres, assistance agency offices, other community facilities (e.g. schools), or at temporary or open spaces. Logistics requirements may include electricity supply, generators, access to the internet or sound systems to facilitate presentations, seating, shade, heating, childcare, or other measures to accommodate participants comfortably.
- Sessions should be organised locally to facilitate maximum participation and easy access for community members.

**Session:**

- Orientation sessions may vary between 1 hour and 2-3 hours. The day and time of day should be selected according to the convenience of the target participants.
- Orientation sessions need a combination of skills to ensure the sessions meet their objectives. The team should be trained in communication skills and should be trained specifically to deliver core orientation modules. Skills required include:
  - **Technical resource skills:** to support the preparation, presentation and explanation of information, and to answer technical questions during discussion
  - **Community mobilisation skills:** to support activity planning and preparations, mobilise participants, facilitate and record discussion and collect feedback

# 7.5 Community orientation sessions

## Specification

### Scope:

- Standardised, authorised information should be used to ensure accuracy and consistency.
- The extent of content depends on whether orientation sessions are one-off or part of a series, and/or single activities or part of a wider programme of technical assistance activities.
- Local conditions should be taken into account (e.g. information for steep slopes is not required in plain areas). Local examples should be incorporated to increase local recognition.
- Frequently asked questions may be collected in advance to be addressed during the session presentation.

### Communication:

- Terminology should be accessible to general audiences and not highly technical. Local languages and local terminology should be used as often as possible.
- Presenting information should include experiential or visual resource material, such as videos, photographs, or other resources, using real materials and models where feasible.
- Over-reliance on one-way communication by presenters should be avoided. Discussion, questions and interaction should be encouraged.
- Reference materials should be provided for further information, which serve as a record of what was presented or to pass on to others. This may include print materials on technical guidance, contacts for advice, calendars for events, and locations of demonstrations.

### Feedback, monitoring and reporting:

- Questions arising, and discussions taking place, during orientation sessions should be documented and inform the further development of common resource materials for orientation sessions, as well as reported to policy and programme decision makers.
- Feedback on the sessions should be systematically collected on the days they take place, and the content, communication and impact should be evaluated afterwards.
- Data on the locations, numbers and profiles of participants should be recorded through standardised information management tools to facilitate aggregation.

## Related activities

- Community orientation sessions may promote the services of technical assistance resource centres and promote community participation in further training and awareness activities.
- Specific information needs may be addressed through focus group sessions.

## Benefits/challenges

Orientation sessions generate momentum and provide consistent information to a large number of people.

Orientation sessions can be targeted to priority areas of early recovery activity and/or maximum need.

These sessions should help policy makers and implementing agencies to understand concerns and priorities to advance responsive programming.

Orientation sessions require trained and skilled resource persons to engage and hold audience attention, and effectively answer questions.

Presentation content and reference materials require preparation by skilled persons and may require validation or approval.

In dynamic recovery situations, policies, standards, institutional arrangements and other key information evolve rapidly. Orientation session content may require frequent additions or revisions, with consequences for training presentation personnel.

## 7.5 Community orientation sessions

Participation in orientation sessions requires a commitment of time. It is often difficult to get people to return for additional topics or updated information. Discussions may become negative or politically charged, particularly when government officials are present to respond to questions. Skilled facilitation is required to handle conflict or tensions, and to ensure the session meets communication objectives.

### Case Study
### Women's community meetings in Nepal and Pakistan

Community orientation and information sessions were organised by and for women at village level on a regular basis throughout the course of recovery, which enabled women to directly access information on government policies and standards, to hear about technical assistance availabilityand events, to ask questions and receive informed answers, and to raise concerns and share advice among themselves. In areas where large proportions of male household members were abroad as migrant workers, access to support for women encouraged many to undertake and complete reconstruction of their family homes.

*Community design workshop.* **Source:** *Build Up Nepal.*

**Source:** *Vero Wijaya/UN-Habitat.*

# 7.6 Focus group sessions

Community orientation sessions are generally organised for wide public participation. Focus group sessions are organised for specific target group participation or with small groups around specific topics. Focus group sessions may aim to disseminate information, collect information, or both.

Sessions may be carried out by any of the technical support stakeholders operational in the area.

## Target audience

- Stakeholders according to the focus group topic and/or target group

## Preconditions

- Depending on the topic of the focus group, printed communication or other needed materials, should be developed, validated, produced and prepositioned in advance

## Objectives

- Mobilise target stakeholder groups
- Ensure targeted access to information on reconstruction, construction and development
- Ensure target stakeholder group issues inform policy and programme development through consultation and feedback

## Specification

**Premises:**

- Focus group sessions may be organised at government offices, technical assistance resource centres, assistance agency offices, other community or private facilities, or temporary or open spaces. Logistics requirements may include electricity supply, generators, access to the internet or sound systems to facilitate presentations, seating, shade, heating, childcare, or other measures to accommodate participants comfortably.
- Focus group sessions may be held in association with model house construction, practical training or other events, determining the location.

**Sessions:**

- Orientation sessions may vary between 1 hour and 2-3 hours. The day and time of day should be selected according to the convenience of the target participants. A series of sessions may be required to address complex topics, compile and review information, or track progress and issues at intervals. Sessions may be repeated with different groups.
- Focus group sessions need a combination of skills to ensure the sessions meet their objectives, including:
  - **Technical resource skills:** knowledge of the topic to present information, respond to questions and facilitate consultation.
  - **Community mobilisation skills:** to support activity planning and preparation, mobilise participants, facilitate and record discussion, and collect feedback.

**Scope:**

- Focus group sessions may be primarily focused on communicating specific information to a target group, discussion and information collection and feedback from a target group or on a specific topic, or a combination of both. In both cases, the session should be well facilitated to capture the experience, knowledge, opinions, and priorities of the group.

# 7.6 Focus group sessions

## Specification

- Focus Group Sessions may be devised on the basis of topic or target groups.
- Target groups may include:
  - **Occupational:** e.g. masons, contractors, transporters, block makers, technical students, migrant labour
  - **Profile:** e.g. women, youth, elderly, disabled
  - **Location/status:** e.g. by street/neighbourhood/village, property owners, landlords, renters, displaced
- Topics may include:
  - **Construction:** e.g. construction material supply, quality and cost, labour supply, quality and cost, construction costs
  - **Services:** e.g. household water and sanitation, food preparation and storage, cooking and heating, issues, preferences, priorities
  - **Land and property:** e.g. formal and informal land and property issues affecting reconstruction, tenure status, rental agreements, resettlement or relocation issues

### Communication:

- Terminology should be accessible to the participants. Local languages and local terminology should be used as far as possible with sessions for migrants in their mother languages.
- Presenting information should include experiential or visual resource material, such as videos, photographs, or other resources, using real materials where feasible.
- Over-reliance on one-way communication by presenters should be avoided. Discussion, questions and interaction should be encouraged.
- Reference materials should be provided for further information, which serve as a record of what was presented or to pass on to others. This may include print materials on technical guidance, contacts for advice, calendars for events, and locations of demonstrations.

### Feedback, monitoring and reporting:

- Questions arising, and discussions taking place, during focus group sessions should be documented and inform the further development of common resource materials for orientation sessions, as well as reported to policy and programme decision makers.
- Feedback on the sessions should be systematically collected on the days they take place, and the content, communication and impact should be evaluated afterwards.
- Data on the locations, numbers and profiles of participants should be recorded through standardised information management tools to facilitate aggregation.

## Related activities

- Community orientation sessions may introduce basic information in advance of focus group sessions.
- Other programmes may be developed from, or supplemented by, focus group discussions with target groups, such as building material producers, vendors, and fabricators, as well as youth, elderly or women.

## Benefits/challenges

Focus group sessions can enable issues to be raised and groups to be heard that may face challenges in wider public platforms due to access, exclusion or other factors.

Focus group sessions can ensure specific groups receive additional information and targeted support.

Focus group sessions can provide insight and feedback to inform policies at the central level and to develop tailored programming at the local level.

Participation can mobilise local actors as partners in technical assistance programming including local technical professionals, media, and others who may not be otherwise involved.

With the understanding that people are busy, have little spare time, and need to see a purpose and value to meetings, focus group sessions can optimise consultation processes. Topic-specific meetings can enable participants to access information according to their selected priorities.

Focus groups need informed, skilled, and committed facilitators to be useful.

Focus group sessions are flexible and can be added on to other activities such as model house demonstrations to increase the impact of those activities.

All meetings including focus group sessions require investment of time and resources, which must be balanced in overall technical assistance activity planning.

## Case Study
### Focus group feedback session on information materials

A series of posters illustrating the government's building code for reconstruction were developed by Swiss Cooperation Development (SDC). The focus group discussion featured involves an engineer eliciting feedback from young, local masons on what information they find clear and what information needs further explanation. The sessions required small numbers of participants, so each could see the posters clearly, and their dedicated time over a number of hours in order to investigate questions and record comments.


*Focus group of young masons testing communication materials. Haiti 2011.* **Source:** *Internews.*

# 7.7 Construction material producer and vendor activities

Technical support activities engaging construction material producers and vendors include measures to improve local construction sector capacity and quality, as well as measures established by construction material stakeholders to inform customers and the public.

Property owners, masons and contractors cannot build to required construction standards unless they have access to affordable materials of adequate quality. Improving material supply is a critical component along with improving construction skills and awareness. Increasing material supply may also be critical to facilitate increased demand in reconstruction.

Engaging construction material stakeholders involves strategies operating at two levels, over both the short and long term. At the national level, construction federation representatives engage with authorities on industry regulation and long-term development. At the community-level, local construction material producers and vendors may be mobilised as key stakeholders in technical assistance activities at all stages of recovery. Activities described below refer to community-level engagement.

## Target audience

- Individuals and companies producing and fabricating construction materials
- Individuals and companies distributing or selling construction materials
- Individuals and companies manufacturing or distributing construction equipment
- Authorities or agencies monitoring the quality, price and availability of construction materials
- Local business federations, trade unions, chambers of commerce or related organisations

## Preconditions

- Specifications for construction materials and components should be in accordance with official technical standards validation processes.
- Formal certification or registration of construction material or construction equipment producers, fabricators and vendors may be required by authorities.
- Mechanisms are operational to enforce material quality, environmental protection and other regulations.

## Objectives

- Construction material producers, fabricators and vendors are engaged as technical assistance partners.
- Improved construction material and component quality is supported and promoted in housing recovery.
- Correct use of construction materials and components is promoted in housing recovery.
- Local construction sector capacity is increased and improved to facilitate reconstruction.
- Housing recovery policies and technical assistance activities are informed by increased knowledge of the construction sector.

## Specification

**Identify stakeholders:**

- Identify local construction material stakeholders' names, contact details, locations, capacities, and profiles, including:
  - **Producers:** including by extraction (gravel, sand, timber, bamboo), manufacturing (cement, steel, bricks, blocks, CGI sheets), and fabrication (steel columns, roof trusses)
  - **Vendors:** distribution stakeholders including shops, suppliers, wholesalers, importers, and transporters
  - Plant and equipment stakeholders

# 7.7 Construction material producer and vendor activities

## Specification

**Mobilise stakeholders to participate in the following activities:**

Supply chain monitoring:

- Track information on material supply, range/type, quality, cost, challenges and opportunities; collect data at regular intervals using common formats

Quality assurance:

- Ensure construction material stakeholders are informed of material standards, through training, focus group sessions, and mobile advice; analyse issues relating to quality, particularly in fabrication processes; promote adherence to safety and environmental protection regulations and good practices
- Liaise with authorities and technical agencies for frequent testing of materials, diagnoses of deficiencies, and enforcement of regulations
- Efforts to improve quality may have implications for prices. Collective action is required by producers and vendors to meet required standards and mitigate the risks of competition from substandard and unsafe construction materials available in the market.

Promotion:

- Collaborate with authorities, manufacturers and vendors to display communication materials and target contractors, masons and the public at the point of sale; support promotion and awareness events at manufacturer and vendor premises; train vendors to provide guidance on material quality and construction standards; promote manufacturer and vendor participation in public information events including construction of model houses
- Develop opportunities to incorporate guidance information in material production and packaging

Capacity development, training and business:

- Support producers and vendors in skills development, employment of others, and business development opportunities regarding the use of debris, use of vacant sites, access to credit or financial assistance, rehabilitation of damaged premises, and the replacement or acquisition of equipment. Business development may include financial literacy, contingency planning, participation in insurance and other measures.
- Expanded capacity including decentralised access to materials can accelerate the pace of reconstruction and mitigate inflation.

## Related activities

- Training for construction material producers, fabricators and vendors
- Fixed display, demonstration construction models, and model houses may include promotion by local producers and vendors.

## Benefits/challenges

Improving material quality in the catchment area can make a significant difference to construction quality and safety.

Efforts to improve quality can start early in advance of large-scale reconstruction activity.

Post-disaster revisions to building codes, including the introduction of new materials and technologies, require dissemination to existing and new construction material producers and vendors.

Rehabilitating and increasing local producer and vendor capacity can ensure local economic benefit from increased market demand and protect local businesses from displacement by larger scale external operators.

Improving the local construction sector capacity and quality can contribute to lasting improvements and reduction in risks in future local construction across all sectors.

Technical support activities to support the construction sector do not require large scale funding.

Construction stakeholder involvement in technical assistance activities can provide critical insight to market

dynamics, supply bottlenecks, the rate of reconstruction, and customer preferences and concerns, all of which can inform policy makers and support programme development.

If technical standards are set too high, producers and vendors may not be able to comply and customers may not be able to afford the cost of high-standard materials.

Producers and vendors may not have any interest in, or may not cooperate in, improving standards or promoting better construction. In a construction boom, producers and vendors may see no incentive to improve construction. Without regulatory penalties or consequences for substandard materials, producers and vendors may not take action to improve.

Markets may be dominated by materials imported from outside the area or by external distributors. Engagement with key producers and vendors may not be feasible at the local level and require higher-level engagement.

## Case Study

On-site discussion with blockmakers on their business plans and the technical challenges they face in producing quality blocks.

*Source:* *UN-Habitat.*

# 7.8 Engaging schools, children and young people

Activities engaging schools, students and children in relation to safer and better housing involve strategies operating at two levels. At the national level, the development and mainstreaming of curricula, training of teachers, among other initiatives form part of national education and risk reduction strategies included in long-term development processes. At the community level, in the shorter-term context of reconstruction, technical assistance strategies may integrate youth engagement in the public and activities targeting schools and youth organisations.

Children and young people represent a high proportion of the population whose capacity may not be captured through technical assistance activities aimed mainly at adult participation. Dedicated strategies are required to engage children and young people and to optimise the potential of existing systems through which they are organised.

## Target audience

- Children and young people, in schools and out of schools
- Schools and education service providers
- Organisations working with young people

## Preconditions

- Government education authorities, including recovery coordination bodies, may define strategies to engage young people in disaster risk awareness and recovery activities.
- Local school participation requires agreement by school management.
- Specific registration or training may be required to work with or organise events for young people.

## Objectives

- Increase awareness of better construction and housing issues among children, students, and their teachers, through participation in targeted activities
- Introduce behaviour change and social change agendas at a formative/early age
- Reinforce messages reaching the household through children
- Mobilise and empower young people as local leaders and contributors to public discourse

## Specification activities

**Premises:**

- Orientation sessions may be organised at government offices, technical assistance resource centres, assistance agency offices, other community facilities (e.g. schools), private facilities, or temporary or open spaces. Logistics requirements may include electricity supply, generators, access to the internet or sound systems to facilitate presentations, seating, shade, heating, childcare, or other measures to accommodate participants comfortably.
- Focus group sessions may be held in association with model house construction, practical training or other events, determining the location.

**Activities:**

- The structure and scope of activities may range from minimal intervention such as the provision of materials to field-based interactive sessions. The location and duration of sessions and the inputs required will vary accordingly. The list below illustrates a range of typical activities.
  - **Provide teaching and learning resources to local schools:** posters, models, and other public information materials distributed to local schools, for both display and reference. Visual information may be targeted at public audiences or children specifically. Posters, comic or other materials may be distributed in larger volumes for children to take home.
  - **Orientation sessions:** orientation sessions may be organised in schools, technical assistance resource centres, or other premises. The content should be tailored for younger participants and include additional exercises, group activities, and interaction in the learning context. Teachers may act as resource persons and facilitators and should have capacity-building inputs in advance.

## 7.8 Engaging schools, children and young people

### Specification activities

- Debates: debates at different age levels, within schools, between schools, or in the community may incentivise participants to explore and consider issues and articulate information and arguments. Debates can inform and engage peer audiences. Debates may not be the optimum mechanism for technical topics, but better suited for issues such as behaviour change, social responsibility, livelihoods and the economy, governance, climate change and risk management.
- Competitions: essay writing, drawings, quizzes and other types of competition may be organised at different age levels, within and between schools, and within the local community. The winning contributions may be displayed in schools, technical assistance resource centres, or other locations. Winning contributions may be compiled for publication or uploaded on the web.
- Field visits/walkabouts: technical support agencies may collaborate with schools and organisations working with young people to use the local area for learning opportunities. These opportunities include understanding planning and development control; how people use buildings, services and public spaces; construction typologies, material and construction quality; good and bad practices; water and sanitation, etc. Programmes focused on understanding local area development and construction issues need to be scheduled for manageable groups, involve technical resource persons from government and support agencies, and coordinated with exercises or classroom activities.
- Field visits projects: technical assistance resource centres, demonstration sites and events, model house sites, and agency projects may accommodate specific visits and events for schools and students. Children will inform their families and remember the experience in future. Visits should encourage interaction, investigation and associated activities.
- Learning by doing, practical activities and investigation: earning by doing is a key strategy for all ages. Schools, children and young people may be facilitated to take part in practical activities and exercises, individually and in groups. Activities may include drawing the house they live in, observing their local area and housing practices, preparing checklists, calculating the number of blocks needed for a wall, mixing concrete, bending steel, or collecting and measuring rainwater. Activities may be organised in school, resource centres, agency facilities, or outdoor sites.
- Learning through expression: children process information through reflection and expression. Activities may include discussion and debate, writing, drawing, photography, film, acting, and other creative activities.
- Continuous learning: engagement with schools, teachers and children should be programmed over the duration of local support activities. Engagement should include a series of activities, incremental accumulation and processing of knowledge. Opportunities for the programme to be planned and driven by schools and children should be preferred and supported to encourage initiative and foster sustainability.
- Gender: separate or different activities or sessions may be required for girls and boys according to the socio-cultural context.
- Unemployed Youth: the list above refers to awareness and mobilisation activities with children and young people. Strategies to support unemployed or underemployed young people seeking livelihood opportunities are addressed in Chapter 4: Training.

# 7.8 Engaging schools, children and young people

## Specification activities

### Communication:

- Terminology should be accessible to children and young people. Content may be tailored for different age groups.
- Presenting information should include experiential or use of visual resource material, using real materials and models where feasible.
- Provide reference materials for further information, as a record of what was presented or to pass on to others.
- Experiential (learning by doing) and interactive communication optimises engagement and enables adaptation according to participants' interests and knowledge levels.

### Capacity:

Activities with children and youth require resource persons and facilitation. Facilitation may be by youth and community leaders, teachers and educators, social mobilisation, and community liaison personnel. Existing programmes or agencies working with children and young people apart from schools should be encouraged to partner in the design and implementation of project activities. These activities may include sport, culture and arts, health and hygiene promotion, leadership, or other organisations or programmes.

### Feedback, monitoring and reporting:

- Data on the locations, numbers and profiles of participants should be recorded through standardised information management tools to facilitate aggregation.
- Feedback from facilitators, participants, and their parents should be systematically collected on the day the feedback was provided and afterwards, the content, communication and impact should be evaluated in order to inform further planning and implementation of children and youth-focused technical assistance activities.

## Benefits/challenges

Mobilising children and young people can build a broad base of awareness of risk and safer and better housing for the longer term.

Activities can be flexible in planning and implementation and adjusted to the resources available.

Dedicated youth programming ideally requires skilled, experienced persons.

In any community the numbers of children and youth are very large. Partnerships with school systems, youth organisations, and community organisations working with children can ensure activities are scaled up as required and enable existing systems to play a vital role in supporting recovery.

One-off or poorly prepared activities may result in only token engagement and limited impact.

Children and schools are tasked with a multitude of behaviour change agendas. The balancing of agendas, time, and interest will vary from place to place and time to time. Schools and teachers should not be expected to become experts in each behaviour change topic. They require training, advice, resources and resource persons to develop and implement activities and to advocate behaviour change agendas in an informed and effective way.

Activities and resources developed for recovery are transferable to other areas and may be institutionalised into curricula with lessons learned from feedback and evaluations.

## Case Study
### Worldwide Initiative for Safe Schools

The Worldwide Initiative for Safe Schools (WISS) is a government-led global partnership for advancing safe school implementation at the national level. The Initiative is coordinated by UNISDR and was developed in collaboration with key partners from the Global Alliance on Disaster Risk Reduction Education and Resilience in the Education Sector as a response to the High Level Dialogue Communiqué at the 2013 Global Platform for Disaster Risk Reduction.

www.unisdr.org/we/campaign/wiss

## Case Study
### Global Program for Safer Schools

The Global Program for Safer Schools (GPSS) aims to boost and facilitate informed, large-scale investments for the safety and resilience of new and existing school infrastructure at risk of natural hazards, contributing to high-quality learning environments. The focus is primarily on public school infrastructure in low and middle income countries.

www.worldbank.org/en/topic/disasterriskmanagement/brief/global-program-for-safer-schools

**Guidance resources include:** "Towards safer schools construction. A community-based approach."

www.gfdrr.org/sites/default/files/publication/45179_towardssaferschoolconstruction2015_0.pdf

## Case Study
### Pakistan floods in 2011

School children play a game designed to build awareness of the causes and impacts of flooding in areas experiencing increasingly frequent risks. Games enable children to process the trauma of losing their homes and being displaced, as well as empowering them to be better prepared in future with lessons on safety and evacuation.

*Source: UN-Habitat.*

## Case Study
### School quiz competition on the topic of earthquake safety and safer construction in Nepal

*School children and teachers are engaged in simple activities requiring low-cost logistics.* **Source:** *Medair.*

## Case Study
### Vietnam: school roof strengthened with restraining bars to prevent typhoon damage

A development workshop was carried out to demonstrate work on schools, to keep schools safe and designate them as key community buildings and evacuation centres, and to provide training and generate awareness of measures for people to replicate on their own houses.

**Source:** *Development Workshop.*

## Case Study
### Children in disasters - games and guidelines to engage youth in risk reduction, IFRC 2010

These guidelines consists of two main parts: 1) guidelines for Red Cross and Red Crescent national societies on how to start up and engage with other stakeholders in country in rolling out disaster risk reduction (DRR) education and awareness activities for children - not only in school, but also in the community; 2) games and activities to engage children with key lessons and messages to take away. With a focus on Southeast Asia, cases from Vietnam and Indonesia are highlighted.

www.preventionweb.netfiles/16726_16726childrenindisastersgamesandgui.pdf

*Children in Lombok Indonesia 2018.* **Source:** *IFRC.*

# 7.9 Housing group for collective construction

A housing group is a mechanism for a group of households to reconstruct or repair a number of houses collectively, through joint budget management, joint procurement and joint construction.

Housing groups may be mobilised and operate informally to carry out joint activities or may be mobilised and operate formally (e.g. with single financial grants managed by the group), with implications for financial support policies, monitoring and inspection and other activities.

Housing groups may build upon existing social structures or practices and may provide advantages over programmes based on individual household reconstruction.

Housing groups differ from community contracting insofar as they refer to housing construction related activities only and not to wider community development or infrastructure works commonly undertaken through community contracts.

## Target audience

- Households
- Communities
- Financial service providers
- Micro finance organisations

## Preconditions

- Formalisation of housing groups may be defined in policies or institutional guidance.
- Financial assistance mechanisms for housing groups may be formalised with associated group financial management procedures and accounting formats.

## Objectives

- Mobilise and empower groups of households to plan and undertake housing reconstruction and joint repair efforts to achieve efficiencies in time, cost and quality
- Build upon social structures and practices to inform reconstruction policies and mechanisms
- Increase support for vulnerable households through promoting cooperation
- Increase flexibility for households within housing reconstruction financial and technical support mechanisms

## Specification

- Housing groups may be formal (e.g. operating with a single budget and joint account) or may be informal where households collaborate in an ad hoc manner. The level of formality and terms and conditions will have implications for government authorities, technical assistance actors and associated administration.
- Housing groups may be promoted through mass communication campaigns in parallel with local promotion.

**Activities:**

- Promote housing groups through local community orientation sessions to explain housing group policies and terms and conditions in relation to housing reconstruction and repair, including financial assistance, technical and other requirements.
- Register housing groups if formally required.
- Provide training for housing group members on issues specific to the group mechanism including financial management, grievance redressal, reporting and administration.
- Support housing group activities including site planning, housing design, specifications, bills of quantities, site supervision checklists, quality assurance, and reporting.
- Support housing group production or fabrication of materials, construction skills development, and transportation initiatives for group procurement.

## 7.9 Housing group for collective construction

### Specification

**Feedback, monitoring and reporting:**

- Data on housing group locations, numbers and profiles of participants should be recorded through standardised information management tools to facilitate aggregation.
- Feedback from orientation sessions, housing group training, technical assistance, and implementation of housing group activities should be systematically collected to evaluate the promotion of the group mechanism. Feedback should relate to inputs required in developing capacity, issues arising in the operation of groups, and the impact of group mechanisms on housing recovery. Findings should inform housing recovery policies and the development of technical assistance.

### Related activities

- Community orientation sessions may promote housing group information.
- Community engagement and planning (e.g. village, neighbourhood and community settlement analysis, planning, rehabilitation and development) may complement the activities of housing groups through site mitigation, site planning, infrastructure support and capacity building measures.
- Community contracting mechanisms may be used for housing repair, reconstruction or upgrading.

### Benefits/challenges

Housing groups can reduce the time and cost of construction through group procurement, joint contracting, shared supervision responsibilities and other measures.

Housing groups can operate in rural and urban areas.

Housing groups may reflect and build upon existing social structures and enable joint planning, budgeting and flexibility within the group according to their needs and preferences.

Housing groups using single accounts can simplify the provision of financial assistance for funding agencies and access to financial assistance for communities where services are limited or low percentages of households are account holders.

Disputes within housing groups, or failures to adhere to terms and conditions, may result in issues that are difficult to resolve for authorities and assistance agencies. Terms and conditions need to be carefully designed and enforced.

Housing groups may not be viable depending on the context (i.e. where social and cultural structures and practices do not adequately support collective mechanisms).

## Case Study
### Aceh Nias Settlements Support Programme (ANSSP) housing cluster approach

Under UN-Habitat's Aceh Nias Settlements Support Programme (ANSSP), housing reconstruction was organised on the basis of clusters. Families of 8-12 members formed themselves into a clusters. Clusters were normally neighbours who knew each other well. Each cluster opened a bank account in its name, and signatories were elected by the cluster members. Cluster members agreed on house designs and cooperated on the procurement and transportation of materials, as well as the contracting or construction of the houses.

Under the ANSSP programme 344 housing clusters were established. Housing reconstruction based on this collective model resulted in standardisation of core houses. The cooperative approach, which built upon pre-disaster social structures and practices, enabled the elderly and other vulnerable households to complete construction at the same time as their neighbours.

- www.fukuoka.unhabitat.org/projects/indonesia/pdf/indonesia.pdf
- www.gfdrr.org/sites/default/files/publication/Rebuilding%20a%20Better%20Aceh%20and%20Nias%20-%20Stocktaking%20of%20the%20Reconstruction%20Effort.pdf
- www.tsunami-evaluation.org/The+TEC+Synthesis+Report/Full+Report.htm

*Women organising bulk arrival of materials for housing reconstruction. Aceh Indonesia 2005.* **Source:** *Vero Wijaya/UN-Habitat.*

*Typical houses reconstructed through housing group. Aceh Indonesia.* **Source:** *UN-Habitat.*

# In-community technical assistance

## 7.10 Housing safety audit

Many buildings in disaster-affected areas may be damaged, or may have escaped damage but remain vulnerable to damage in future disasters. Community-based housing safety audit activities can help households and technical assistance agencies to develop and implement appropriate measures to improve the safety of such houses. Audits can also support households to check that newly reconstructed houses are meeting safety requirements. Introducing audit tools after disasters can help familiarise households, construction professionals, assistance agencies and authorities with tools that respond to current concerns and can be used regularly in future disaster management activities.

A housing safety audit, often referred to as a building vulnerability and risk audit or assessment, is an analysis of vulnerabilities in the house, including structural and non-structural measures, services, furniture, and how the house is used by its occupants. A household safety audit may be carried out for an existing building or as part of planning construction of a new building. Audits may include checklists based on local housing and construction typologies and take into account local hazards.

Audits may be supported by technical professionals or carried out by households by themselves.

Audits and preparedness planning both incorporate actions to be undertaken before, during, and after a disaster event. Audits differ from preparedness exercises by providing analysis of, and recommendations for, structural and permanent measures to increase the safety of the house.

### Target audience

Household members

### Preconditions

Audits may be formalised with checklists and written/visual data or may be informal through observation and discussion processes on-site.

### Objectives

- Increase awareness among all household members of housing vulnerabilities, risks and safety
- Support household risk management decisions
- Mobilise and empower households to reduce their housing risks and to prepare for disasters
- Increase all household members' awareness of household management and behaviour measures that can mitigate the impact of disasters
- Increase data and analysis of housing technical issues and household attitudes to inform risk management policies and programmes

### Specification

- Audit checklist formats and guidance may be developed and disseminated by government or technical assistance agencies. Formats may be generic or may be developed for a range of housing typologies and/or hazards.
- Housing safety audits may be promoted through mass communication campaigns in parallel with local promotion.
- Audits may be carried out at specific stages in planning for reconstruction or may be carried out at scheduled times (e.g. related to hurricane season).

**Activities:**

- Promote housing safety audits through local community orientation sessions, with dissemination conducted through technical assistance resource centres.
- Training and advice for households may include distribution of printed materials, demonstration buildings, remedial measures, or mobile team support.
- Self-audit or unaccompanied audit: Training may be provided by technical assistance agencies to household representatives to carry out audits themselves.

# 7.10 Housing safety audit

## Specification

- Supported audit: Technical assistance agency personnel (construction professionals or skilled construction workers) may support households to carry out audits. Audits may include analysis of building vulnerabilities, providing technical advice for recommended risk mitigation, and safety improvement remedial measures. Where specific technical advice is issued, a copy should be retained by the technical assistance agency and by the household/community representative for reference.
- Audits may be carried out at specific stages in planning for reconstruction or during scheduled times (e.g. related to hurricane season).
- Supported audits may be carried out as a campaign activity or as part of regular technical support to households. Unaccompanied audits may be carried out at any time.

### Scope:

The audit process may include the following topics:

- Identification of risks: meteorological (flooding, heavy rain, hurricane, heavy snow) and geological (earthquake, landslide, volcano, tsunami)
- Analysis of past experiences and potential future impacts of identified disasters on the house (and site)
- Visual examination and documentation: visual examination of the house, internally and externally for familiarisation and overview; documentation of the building to facilitate annotation (e.g. plans, elevations, photographs); annotation may also be done directly on site (e.g. marked up with chalk)
- Identification of potential damages and losses and measures to mitigate vulnerabilities:
  - Structural defects and vulnerabilities (e.g. roof not tied to walls, building not anchored to ground, configuration of openings)
  - Non-structural vulnerabilities (e.g. cupboards not fixed to the wall, openings to be secured)
  - Service vulnerabilities (e.g. electricity, gas, water supply)
  - Mitigation measures may require permanent construction works, temporary works or maintenance regimes
- Identification of household member vulnerabilities and needs (e.g. clear evacuation routes, special needs of mobility impaired members) and mitigation measures:
  - Plan for construction works, including specification and costs
  - Plan for non-structural and service works, including specification and costs
  - Plan for household member activities and responsibilities

### Feedback, monitoring and reporting:

- Data on housing safety audits, numbers and profiles of participants should be recorded through standardised information management tools to facilitate aggregation.
- Monitoring of audit data can identify serious and prevalent shortcomings and common remedial measures in housing safety to inform housing policies, standards and technical assistance.
- Feedback from orientation sessions, from housing safety audit training, from self-audit and supported audit participants, should be analysed to evaluate the audit tools, training and communication, and issues arising in their implementation. Evaluate the rate of adoption and the effectiveness of safety improvement measures.

# 7.10 Housing safety audit

## Related activities

- Community orientation sessions may promote housing safety audits.
- Model house construction and promotional activities may communicate key safety measures.
- Safety audits may be organised in schools, other public buildings, local businesses or other private buildings.

## Benefits/challenges

Participating in audits can educate all household members to understand the vulnerability and safety issues of the building they are most familiar with and to be more aware of building safety in general.

Audits can enable households to be proactive in increasing their own safety, even through cost-free measures such as keeping evacuation routes clear, and support households to prioritise investment in safety incrementally and according to their means.

Audits can be applied in existing buildings and in new construction, reaching a wide target audience and high proportion of the building stock.

Audits can be carried out at any time during the recovery period.

Audits can link preparedness activities and building compliance or risk reduction activities.

Checklist formats and unaccompanied audits depend on literacy levels.

Unaccompanied audits may leave households unsure of which improvement measures to undertake unless they have access to information or advice through other sources.

Complex building defects may require trained technical advice to ensure recommended remedial measures are appropriate.

## Case Study
### Identifying the need for reinforcement around window opening during safety audit of an existing building

*Source:* *UN-Habitat.*

# In-community technical assistance

## 7.11 Housing environmental audits

A housing environmental audit is an audit of the performance of the building envelope and building services, audit of resource consumption and how the house is used by its occupants. A housing environmental audit may be carried out on an existing building or as part of new building construction planning. Audits may include checklists based on local housing and construction typologies and taking account of local climate and other factors.

Audits may be supported by technical professionals or carried out by households by themselves.

### Target audience

Household members

### Preconditions

- Audits may be formalised with checklists and written/visual data or by informal observation and verbal processes on-site.
- Audits may reference environmental provisions in building codes or in government-approved technical guidance

### Objectives

- Increase maximum household member awareness and understanding of housing environmental performance, deficiencies and improvement measures such as resource management
- Mobilise and empower households to improve their housing environmental performance and resource management
- Contribute to more sustainable resource management at settlement and societal levels and increase resilience through improving housing environmental performance and self-sufficiency
- Mobilise and empower households to prepare for severe weather (extreme heat or cold, heavy rain or snow, drought), disasters, the impacts of climate change, or interruptions to services caused by other crises
- Improve household health and wellbeing through improving interior comfort and contributing to public health improvements, particularly for the elderly, very young and other housebound household members
- Increase data and analysis of housing technical issues and household attitudes to inform housing recovery policies, technical assistance programmes, and environmental management policies and programmes

### Specification

- Audit checklist formats and guidance may be developed and disseminated by government, or technical assistance agencies. Formats may be generic or may be developed for a range of housing typologies and/or climate contexts.
- Housing environmental audits may be promoted through mass communication campaigns in parallel with local promotion.
- Audits may be at scheduled times (e.g. related to cold, hot, dry or wet seasons).
- Audits may be carried out at later stages in reconstruction to improve the performance of newly constructed buildings, installation of new services, or to maximise opportunities in roof completion.

**Activities:**

- Promote housing environmental audits through local community orientation sessions, and dissemination through technical assistance resource centres.
- Training and advice for households may include distribution of printed materials, demonstration buildings, remedial measures, or mobile team support.
- Self-Audit or unaccompanied audit: training may be provided by technical assistance agencies to household representatives to carry out audits themselves.

# 7.11 Housing environmental audits

## Specification

- Supported Audit: technical assistance agency personnel (construction professionals or skilled construction workers) may support households to carry out audits. Audits may include analysis of building and service performance, providing technical advice for recommended risk mitigation, and safety improvement remedial measures. Where specific technical advice is issued, a copy should be retained by the technical assistance agency and by the household/community representative for reference.
- Supported audits may be carried out as a campaign activity or as part of regular technical support to households. Unaccompanied audits may be carried out at any time.
- Public health expertise may contribute to diagnosis of housing-related ill health due to poor thermal, ventilation, or damp conditions or due to poor water quality and sanitation facilities.

### Scope:

The audit process may include the following topics:

- Identification of environmental performance and resource factors: temperature, water management and sanitation, fuel and energy use, ventilation, shade, shelter and slope stabilisation; analysis of past experiences and potential future impacts of identified environmental stresses on the house, site and household
- Visual examination and documentation: analysis of household resource use, including water consumption, fuel consumption, including seasonal factors, costs
- Identification of shortcomings and potential mitigation or improvement measures:
  - Site vulnerabilities and potential (e.g. shading, wind breaks, site drainage)
  - Building defects and vulnerabilities (e.g. locations of heat loss or heat gain, insufficient ventilation of smoke)
  - Service vulnerabilities (e.g. electricity, gas, water supply)
  - Mitigation measures may require permanent construction works, temporary or seasonal measures, service installations or maintenance regimes

### Feedback, monitoring and reporting:

- Data on housing environmental audits, numbers and profiles of participants should be recorded through standardised information management tools to facilitate aggregation.
- Monitoring of audit data can identify serious and prevalent shortcomings in housing environmental performance and common remedial measures to inform housing policies, standards and technical assistance.
- Feedback from orientation sessions, housing environmental audit training, self-audit and supported audit participants should be analysed to evaluate the audit tools, training and communication, and issues arising in their implementation.
- Evaluate the rate of adoption and the effectiveness of environmental improvement measures.

# 7.11 Housing environmental audits

## Related activities

- Community orientation sessions may promote housing environmental audits.
- Model house construction and promotional activities may communicate key environmental improvement measures.
- Environmental audits may be organised in schools, other public buildings, local businesses, or other private buildings and premises.
- Natural resource management initiatives may be linked to housing construction and household fuel consumption awareness activities.

## Benefits/challenges

Environmental performance improvements can result in immediate and sustained improvements in household comfort and health.

Environmental performance improvements can result in decreased household running costs and reduced time spent on domestic activities.

Audits can educate all household members to understand environmental issues in the building they are most familiar with and to be more aware of environmental performance and resource use in general.

Audits can enable households to be proactive in improving their own housing environmental management, even through low-cost measures such as planting for shade, and support households to prioritise investment in environmental sustainability incrementally and according to their means.

Audits can be applied in existing buildings and in new construction reaching a wide target audience and high proportion of the building stock.

Building codes may include environmental performance requirements. Audits can promote compliance.

Checklist formats and unaccompanied audits depend on literacy levels.

Unaccompanied audits may leave households unsure of which improvement measures to undertake unless they have access to information or advice through other sources.

Complex building or service shortcomings or recommended measures may require trained technical expertise to ensure advice is appropriate and correctly communicated.

## Case Study
## Improving stoves after the Pakistan earthquakes and floods from 2005-2010 and ongoing housing improvement programmes, The Heritage Foundation

Reconstruction after the 2005 earthquake highlighted the need to improve not only the earthquake safety of buildings, but also the fuel efficiency and safety of stoves, to reduce smoke and risks of respiratory infections, and to mitigate the environmental impact of domestic cooking and heating.

Women in technical assistance teams came together to research new and local stove types, and agreed upon a simple low-cost replicable model which they then promoted through community outreach activities. The stove, or "chulah," revived local traditional knowledge but was new to many communities. The stove reduced wood use by an average of 50 percent in different areas, and reduced cooking time by 30 percent, representing significant benefits for women. Women trainers travelled between communities to demonstrate to other women how to construct the stove and to discuss their experience of its use and advantages. Improved stoves were also promoted after the catastrophic monsoon floods of 2010 and 2011.

The Heritage Foundation has elaborated and promoted similar low-cost traditional stove models in other districts. They report over 40,000 stoves built since 2014 in programmes which improve women's health and alleviate poverty.

Synergies between housing improvement initiatives and technical assistance for recovery can optimise the opportunities of community-based recovery outreach and training, and simultaneously construction of a large proportion of the building stock to promote a range of improvements.

www.world-habitat.org/world-habitat-awards/winners-and-finalists/pakistan-chulahs

*Women training women to build fuel-efficient stoves during housing reconstruction after the 2005 Kashmir earthquake. Pakistan.* **Source:** *UN-Habitat.*

*A local stove, or "chulah," constructed by women in Pakistan.* **Source:** *The Heritage Foundation.*

# 7.12 Household disaster preparedness planning

A household disaster preparedness plan includes identifying risks to the house and household and preparing a plan of actions to be taken by the household before, during and after a disaster event.

A disaster preparedness plan may use a standardised checklist or other tool, based on local housing and construction typologies and taking account of local hazards. Plans may reference emergency service details.

Disaster preparedness plans differ from housing safety audits by not covering structural assessments or recommendations for major construction measures.

Disaster preparedness planning may be carried out at the household level only, collective levels such as in multi-family buildings, city blocks, neighbourhoods or villages, or the municipal/district level.

## Target audience

Household members

## Preconditions

Checklists, emergency information and guidance may be provided by government or technical assistance agencies

## Objectives

- Increase household awareness of disaster risks and household vulnerabilities to risks
- Increase household awareness of emergency services and recommended actions to be taken in the event of disasters
- Mobilise and empower households to prepare for disasters, reduce deaths and injuries, and reduce housing losses, including household and personal asset losses

## Specification

- Planning checklist formats and guidance may be developed and disseminated by government or technical assistance agencies. Formats may be generic or may be developed for a range of locations and hazards. Government authorities, emergency service operators, and utility providers may provide emergency service guidance independently.
- Household disaster preparedness planning may be promoted through mass communication campaigns in parallel with local promotion. Communication campaigns may be scheduled at fixed times (e.g. at the outset of hurricane season) or may be mobilised on short notice in advance of severe weather.

### Activities:

- Promote household disaster preparedness planning through local community orientation sessions, local media, and local awareness activities
- Provide training and advice for households through the distribution of printed materials, demonstration buildings, or mobile team support

### Scope:

Household disaster preparedness planning may include the following topics:

- **Identification of risks:** meteorological (flooding, heavy rain, hurricane, heavy snow, heatwave, cold wave, drought), geological (earthquake, landslide, volcano, tsunami), and fire (wildfire, building fire)
- **National and local information and communication:** information sources and communication channels including early warning systems, alerts, government services, emergency services, contact details, locations
- **Household information and communication:** prepare personal documentation and contact details, property documentation, insurance details, utility details, family and neighbour contact details, health requirements (e.g. prescriptions for chronic illness), mobility requirements

# 7.12 Household disaster preparedness planning

## Specification

- Pre- and post-event housing checks:
  - Securing property: on site or building (e.g. clearing storm drains, fixing storm shutters)
  - Securing moveable assets (e.g. moving items to upper floors to avoid flooding, moving vehicles)
  - Securing services and utilities (e.g. turning off gas supply)
  - Securing contingency services (e.g. organise back-up supply of water, fuel, batteries)
  - Securing emergency items (e.g. materials and tools for emergency repairs, weatherproofing)
  - Securing contingency supplies (e.g. food, bedding, clothing, cash)
  - Securing evacuation (e.g. packing 'go-bags' with essentials in the event of evacuation, identification of evacuation options)
  - Securing off-site back up (e.g. cloud back-up of documentation, storage at alternative locations)
- Plans may include preparation of information, procurement of items, execution of works, and the allocation of tasks and responsibilities.
- Plans may be written according to a format/checklist or may be informally recorded.

### Feedback, monitoring and reporting:

- Data on participation in orientation sessions and dissemination of information materials should be recorded through standardised information management tools to facilitate aggregation.
- Feedback from households should be analysed to evaluate orientation session, training and awareness activities, and information materials for content and communication and for issues arising in their implementation.
- Evaluate the rate of adoption and effectiveness of preparedness measures.

## Related activities

- Community disaster preparedness planning. **See 7.13.**
- Mass communication campaigns related to early warning mechanisms or regular promotion of disaster preparedness may be supplemented by community-based mobilisation of household preparedness.
- Community orientations, model house construction, and promotional activities may demonstrate disaster preparedness measures.

## Benefits/challenges

Disaster preparedness planning can educate all household members to understand the safety issues of the building they are most familiar with and to be more aware of building safety in general.

Disaster preparedness planning can enable households to be proactive in increasing their own safety, even through cost-free measures such as keeping evacuation routes clear, and support households in prioritising investment in safety incrementally and according to their means.

Household preparedness can reduce the workload of emergency services and assistance agencies.

Preparedness information can be disseminated to a wider target audience and support actions by a high proportion of the concerned population.

Checklist formats and guidance information depend on literacy levels.

Early warning and communication systems may not be sufficiently developed to optimise preparedness activities.

## 7.12 Household disaster preparedness planning

### Case Study
Citizen home emergency and disaster preparedness resources

- www.fema.gov/pdf/areyouready/areyouready_full.pdf
- www.improvenet.com/a/home-emergency-disaster-safety

# In-community technical assistance

## 7.13 Community disaster preparedness planning

A community disaster preparedness plan includes identifying risks to the settlement/community and preparing a plan of actions to be taken by community members before, during and after a disaster event.

A disaster preparedness plan may use a standardised checklist or methodology taking into account local risk information, local settlement characteristics, and the support plans of authorities and emergency service providers.

Disaster preparedness plans differ from settlement risk management by not covering infrastructure, construction, or site works. Community-level disaster preparedness planning may be supplemented by household-level planning.

### Target audience

- Communities, groups of households

### Preconditions

- Collective or community disaster preparedness plans require identification of participants and the boundary of the area concerned.
- The role of authorities and assistance agencies in the planning process should be defined.

### Objectives

- Increase community awareness of disaster risks and disaster response
- Mobilise and empower communities to prepare for disasters, reduce disaster impacts, and optimise response capacities
- Increase coordination between communities, authorities, and assistance agencies through sharing information or through joint planning

### Specification

- Planning checklist formats and guidance may be developed and disseminated by government or technical assistance agencies. Formats may be generic or may be developed for a range of locations and hazards. Government authorities, emergency service operators and utility providers may provide emergency service guidance independently.
- Community disaster preparedness planning may be promoted through mass communication campaigns in parallel with local promotion. Communication campaigns may be scheduled at fixed times (e.g. at the outset of hurricane season) or may be mobilised on short notice in advance of severe weather.

#### Activities:

- Promote community disaster preparedness planning through community engagement and mobilisation, local community orientation sessions, local media, and local awareness activities
- Provide training and advice for communities through the distribution of printed materials, demonstration buildings, or mobile team support
- Community planning may be linked to planning by authorities and assistance agencies

#### Scope:

Community disaster preparedness planning may include the following topics:

- **Identification of risks:** meteorological (flooding, heavy rain, hurricane, heavy snow, heatwave, cold wave, drought), geological (earthquake, landslide, volcano, tsunami), and fire (wildfire, building fire)
- **National and local information and communication:** information sources and communication channels including early warning systems, alerts, government services, emergency services, contact details, locations

# 7.13 Community disaster preparedness planning

## Specification

- Community information and communication: population, contact persons and details, maps, infrastructure and utility data
- Pre- and post-event checks:
  - Informing the community (e.g. communication trees, drills)
  - Informing emergency services and authorities (e.g. local authorities, civil defence, security services, health services, transport authorities)
  - Securing the settlement: site mitigation or maintenance measures (e.g. clearing storm drains, repairing embankments, cutting trees)
  - Securing property: community, residential and commercial buildings (e.g. fixing storm shutters, installing flood barriers)
  - Securing moveable assets (e.g. moving vehicles)
  - Securing services and utilities (e.g. sewerage systems, electricity lines)
  - Securing contingency services (e.g. organise back-up supply of water, generators, machinery/tools)
  - Securing emergency items (e.g. first aid equipment, materials and tools for emergency infrastructure and property repairs, weatherproofing, salt for snow)
  - Securing contingency supplies (e.g. food supplies, fuel supplies)
  - Securing evacuation (e.g. identification of evacuation routes, identification and preparation of evacuation centres/collective shelters)
  - Securing off-site back up (e.g. storage at alternative locations)
- Plans may include preparation of information, procurement of items, execution of works, and the allocation of tasks and responsibilities.
- Plans may be written according to a format/checklist or may be informally recorded. Written plans may be displayed in public, shared with authorities, or maintained by designated community representatives.

## Related activities

- Community engagement and planning and community orientation sessions (see 7.6)
- Household disaster preparedness planning (see 7.13)
- Mass communication campaigns related to early warning mechanisms or to regular promotion of disaster preparedness may be supplemented by community disaster preparedness
- Disaster preparedness and contingency planning by national and local government, utility providers, emergency services, civil protection agencies, and humanitarian agencies

## Benefits/challenges

Community disaster preparedness planning can enable communities at high risk or recurring risk to act collectively to reduce losses and organise post-disaster response effectively.

Community disaster preparedness planning may identify and strengthen existing local coping mechanisms and introduce new information, skills and activities.

Community disaster preparedness planning can analyse and address the specific needs and priorities of the elderly, women, young people, disabled, businesses, agriculture, and low-income households.

Settlement-level preparedness measures complement household-level preparedness measures.

Community plans should be feasible in terms of resources and capacities.

Plans need to be reviewed at regular intervals to ensure they are up-to-date, measures are in place, delegations of responsibilities are confirmed, and the community is sufficiently informed.

Early warning and communication systems may not be sufficiently developed to optimise preparedness activities.

# Mobile technical assistance

## 7.14 Technical advice clinics

A 'clinic' is a technical assistance event organised at a fixed time, date and location in the community, to respond to queries and requests for advice. A clinic may be based at a technical assistance resource centre or other facility where people drop in for advice, or it may be field-based and include site visits and walkabouts. Clinics are generally open to the entire community, but scheduled appointments or discussions may be made to facilitate time management. While technical guidance may be available through resource centres or other sources on a continuing basis, the organisation of event-specific clinics can generate increased interest and motivate people to seek advice. Clinics may also be organised in locations where there are no centres or technical assistance services available.

Ideally clinics are planned and implemented with official institutional support and include participation by officials from local and/or national authorities.

Clinics differ from community orientation and focus group sessions by providing more detailed technical or topical advice, individualised advice, and by providing advice on a demand basis.

### Target audience

- Households
- Communities
- Local construction sector actors.

### Objectives

- Provide technical advice through a structured initiative that optimises technical support capacity
- Increase local engagement with TARCs (Technical Assistance Resource Centres) and technical support actors
- Facilitate area-specific and topic-specific analysis of, and solutions for, local construction issues

### Specification

- Clinics may deploy technical assistance personnel and other local construction professionals and workers to advise households and communities on general technical issues.
- Clinics may deploy additional expertise for complex technical issues or advising local construction professional, workers, businesses, and communities.
- Clinics may be one-off events or series of events.

**Activities:**

- Programme topics for clinics for a target area should be planned through coordination between technical assistance personnel, local government representatives and community representatives to identify priority issues and information needs, and to mobilise appropriate resource persons and support materials.
- Clinics should be promoted and prepared in the target area in advance, alerting people of the services available, collecting questions in advance, scheduling activities, and planning logistics.
- Resource persons should be mobilised from technical assistance programmes, local and national authorities, local construction professionals, local construction workers, legal and financial service providers, academic and technical institutions, and local business organisations.
- Resource persons should be provided with training in recovery policies and programmes, if appropriate, in government recovery policies and in community engagement.
- Clinics may involve information and discussion sessions, demonstration sessions, one-to-one advice, walkabouts, and site visits to analyse and discuss issues or to provide advice.

## 7.14 Technical advice clinics

### Specification

- Printed information and other reference materials should be provided to clinic participants, and copies of advice issued by clinic technical personnel should be provided and retained.
- Debriefs should be held with local technical assistance personnel and authorities to increase their capacity and agree to follow-up activities where required.

**Scope:**

Clinics may include the following topics:

- **Damage and vulnerability:** diagnoses of factors in building damage, building habitability advice
- **Demolition and salvage:** safe deconstruction, use of debris, preparation for site reuse
- **Site analysis and site works:** site investigations, soil tests, slope stabilisation, foundations, retaining walls
- **Materials:** quality of materials, correct use of materials, support for local vendors and fabricators
- **Structural and architectural design:** building design, specifications, preparation of bills of quantities
- **Hazard resistant construction:** earthquake, flood and hurricane resistance measures, housing safety improvements
- **Existing buildings:** conservation, repairs, retrofitting, extensions, upgrading, housing environmental improvements
- **Housing services and facilities:** sanitation, drainage, water storage, water quality, rainwater management
- **Risk:** area and site-specific advice on risk, vulnerability and consequences or mitigation works
- **Budgeting:** cost estimation, budget management, savings, financial assistance and credit
- **Land and property:** legal advice, conflict resolution, advice for potential landlords and developers
- **Livelihoods:** business advice for local construction sector enterprise development

**Feedback, monitoring and reporting:**

- Data on clinic locations, dates, topics, and participation should be recorded through standardised information management tools to facilitate aggregation.
- Diagnosis of recovery issues should be recorded and reported to inform recovery policies and technical assistance. Frequently asked questions and requests for advice should be recorded to address information needs.
- Feedback from resource persons and from participants should be analysed to evaluate clinic content and communication and issues arising.
- Evaluate the rate of adoption of advice provided.

### Related activities

Clinics may respond to issues identified by technical resource centres as requiring additional support

## 7.14 Technical advice clinics

### Benefits/challenges

Clinics can optimise scarce technical support resources and coordinate demand and supply of information.

Time-bound events with concentrated activities can focus attention and generate interest.

Clinics can supplement and build the capacity of local technical assistance programme personnel, including on local priority technical issues.

Clinics can engage local construction sector stakeholders and mobilise technical personnel who are otherwise not involved in recovery to play key resource roles even with limited time and availability.

Clinics allow households and communities to interact with engineers, architects, contractors, and other professionals whose advice they would otherwise have to procure commercially.

Clinics do not require permanent facilities or extensive logistics.

The planning and promotion of times, locations, topics and personnel is important to ensure good participation and effective activities. Without preparatory work, activities may be ad hoc and ineffective.

Documentation and recording of issues raised and advice provided through clinics can ensure guidance is followed up and transferable.

Clinics alone will not be able to provide adequate training or promotion of good practices.

### Case Study
### Steel fixing models for mobile support, Haiti 2010

Poor quality, size, and detailing of reinforcing steel columns, bands, and beams were major factors that contributed to the heavy damage and destruction of buildings in the 2010 earthquake in Haiti.

Technical assistance for reconstruction focused on training and awareness of improving steel reinforcement, including using adequate quality and size of bars, and correct tying details at junctions. Steel detailing is a difficult topic to communicate through mass media or printed materials. On-site practical demonstrations were more effective.

Steel models with both incorrect and correct connections were fabricated and transported to community outreach events, training sessions, and to neighbourhoods where buildings were under construction for replication on site. The bars were coloured to simplify understanding. The models were also loaned out to various local organisations to support their outreach activities in more neighbourhoods.

*Mobile, full-size painted steel models to demonstrate connection details. Haiti 2012.* ***Source:*** *UN-Habitat.*

*Government engineer on site in Delmas 32 explaining steel size information to local masons. Haiti.* ***Source:*** *J/P HRO.*

## Case Study
### Development Workshop Vietnam, mobile roof

A full-size demonstration roof toured village to village to show cyclone-resistant construction detailing in Vietnam. The roof attracted attention not only when it stopped at fixed locations for a series of organised events, but also on the road where many passers-by took the opportunity to ask questions of the mobile team.


*Source:* *Development Workshop.*

# Mobile technical assistance

## 7.15 Door-to-door advice/ mobile team support

Technical support in a local area comprises a combination of activities and services at a fixed location, and mobile outreach activities and services covering the target area. Mobile support may be by teams based at the community resource centre, government teams, other support agencies, or some combination of these entities. Programming of mobile team support should be coordinated through the community resource centre.

'Door-to-door' or 'on-site' support by mobile teams aims to reach households and their masons at origin, where advice and guidance can respond to individual and local issues. Mobile support provides sustained continuous engagement, reinforcing training and other inputs, and the two-way process of communication.

### Target audience

- Communities
- Households
- Construction workers

### Preconditions

- Defined terms of reference clarify institutional arrangements, roles and responsibilities, and scope of activities of technical assistance implementing agencies including their field or mobile support personnel.
- The distribution of agencies and mobile team personnel, and confirmation of their catchment areas, may be planned at the outset or clarified progressively.

### Objectives

- Harness local knowledge and skills to be deployed in support of the wider community
- Track and respond to construction and reconstruction activity
- Provide motivational support and technical guidance in advance of and during construction
- Explain and discuss information also communicated through media and training
- Identify information needs through recording of construction trends and frequently asked questions
- Identify extremely vulnerable communities and households and diagnose reconstruction challenges

### Specification

**Mobile teams structures and skills:**

- Field mobile teams: field mobile teams should include technical and community liaison skills. Mobile teams should have experienced masons or skilled construction workers to provide advice and practically demonstrate correct practices. Mobile teams should also include social mobilisers tasked with supporting local interaction, communication, feedback, documentation and reporting. Field mobile teams may be drawn from experienced and skilled persons in the target community and use their local area and community knowledge and contacts to facilitate the work.
- Monitoring and support teams: field mobile teams should be guided and supported by additional technical expertise and experienced social mobilisation personnel in monitoring and support teams. More complex technical queries or field issues, training or demonstration activities require engineering support. Areas and issues of social complexity require greater communication support. Monitoring and support teams should assist and work closely with field mobile teams through training, continuous mentoring, programme and activity planning, response to referred field issues and trends, reporting and analysis.
- Inclusion: mobile teams and monitoring and support teams should reflect the population profile and incorporate women, youth, minority and migrant representatives where feasible, or should ensure they have strategies to engage with a range of people during their field work, including women, but also the specific needs of elderly, disabled, migrant or other profiles.

# 7.15 Door to door advice/mobile team support

## Specification

### Training:

- All field mobile teams and monitoring and support teams should have the following training inputs to ensure they are equipped to provide quality technical advice and to communicate effectively.
- Communication training: communication and social mobilisation skills, community organising, negotiation and facilitation, social protection and inclusion.
- Technical training: basic technical training on construction quality, hazard resistant construction, environmentally sustainable housing, financial inclusion and budget management and other topics.
- Assessment, reporting, monitoring and evaluation training: collection, analysis and reporting of field information, including information management and the use of common tools and formats, to support programme activity planning, and the wider monitoring and evaluation process.
- Continuous training: training for field staff should be a continuous process and include refresher training on the same topics, addition of new topics, review discussions of field issues and field experiences, on-job mentoring by more experienced staff, and feedback and evaluation by the target communities
- Exchange: technical and social mobilisation personnel working in different areas should be encouraged to share and exchange knowledge and skills, through joint planning and activities and visits to different target areas.

### Activities and scope:

- Introducing support: inform households and communities of the structures and sources of support, including government, technical assistance agencies, and financial service providers.
- Introducing information: inform households and communities of basic technical information including construction and financial information. Authorised common reference materials should be used to ensure quality and consistency in this communication to households.
- Organising and promoting events: mobile teams assist in the organisation of promotional activities including community orientation and focus group sessions, model houses and demonstrations, clinics, meetings, promotion and entertainment events. Teams assist with planning, logistics, mobilisation of participation, implementation, and collection of feedback, using their close contacts with the community.
- Promoting training: mobile teams assist in the planning and implementation of training activities, identifying training needs, creating demand for trained workers, organising training, mobilising participants, assisting in the implementation, monitoring and evaluation.
- Providing site-specific technical advice: mobile teams explain and interpret the government-approved standards and guidance according to the specifics of the site and client. This includes site selection, design, specification and budget advice, quality assurance advice, as well as legal and administrative advice. Advice should be provided to the household and to construction workers on site. Complex cases should be referred to monitoring and support teams for follow up.
- Providing household-specific advice: mobile teams assist households and communities in decision-making apart from construction, including facilitating conflict resolution, mobilizing and facilitating cooperation, budgeting and project management advice, identification of vulnerability issues.
- Tracking construction activities: Monitoring and reporting the rate and location of construction activities, the type and quality of construction including patterns of common and severe defective practices, tracking availability, quality and costs of materials.

## 7.15 Door to door advice/mobile team support

### Specification

- Tracking vulnerability: The most vulnerable communities or members of a community may not participate in or be represented in public discussions. The field teams may track particular cases of extreme vulnerability (in terms of shelter and housing conditions, family circumstances or other criteria), and diagnose factors in vulnerability and potential support measures.

**Feedback, monitoring and reporting:**

- Data on clinic locations, dates, topics, and participation should be recorded through standardised information management tools to facilitate aggregation.
- Diagnosis of recovery issues should be recorded and reported to inform recovery policies and technical assistance. Frequently asked questions and requests for advice should be recorded to address information needs.
- Feedback from resource persons and from participants should be analysed to evaluate clinic content and communication and issues arising.
- Evaluate the rate of adoption of advice provided.

### Related activities

- Technical assistance resource centres operate as bases to support mobile team operations **(See Chapter 7: Community-based outreach, mobilisation and engagement).**
- Mobile teams assist the planning and implementation of all community-based activities **(see Chapter 7: Community-Based outreach, mobilisation and engagement)** and community-based training **(Chapter 5: Training and capacity development).**

### Benefits/challenges

Mobile teams provide a platform to recruit and deploy local skilled artisans and social personnel and equip them to support their wider communities in recovery.

Local and mobile teams can adapt technical assistance to local contexts including communicating in local languages and terminology, in accordance with socio-cultural practices and considering local needs and priorities.

Local personnel have extensive networks of contacts, geographical knowledge, and memory of previous disasters.

Door-to-door advice ensures all households have access to technical assistance and advice and a mechanism to ask questions or raise issues of concern.

Door-to-door or on-site advice and support reinforces and follows up all other communication and training efforts.

The mobile team personnel need to have adequate capacity to deliver appropriate and correct advice effectively.

Personnel and logistics costs can be considerable particularly over a long duration. Mobile staff need to be efficiently deployed.

Both technical and social mobilisation personnel may have low literacy levels and require upskilling to fulfil reporting and other tasks.

Skilled artisans are in high demand during reconstruction. Recruitment of artisans for mobile teams may focus on retired artisans or other options.

Sufficiently skilled personnel may not be available in all areas and need to be recruited from outside. Remote or unfamiliar locations may prove challenging for mobile support. Staff retention may be difficult.

Participation in mobile teams should increase local capacity and develop local champions and advocates.

## Case Study
## Community Mobilisation Programme and Mobile Masons, JICA Nepal

JICA supported households and communities in the reconstruction of over 50,000 houses in the heavily damaged districts of Gorkha and Sindhupalchwok, Nepal after the 2015 earthquakes.

At the field level, support programmes included awareness programs for house owners on earthquake-resilient techniques, masons training, door-to-door technical support to the house owners, engineers' training, and facilitation for the formation of community-based Reconstruction Committees (CBRCs). JICA's support at the field level targeted 47 VDCs of Gorkha and Sindhupalchowk districts. In spite of the support, the reconstruction start rate was only 21.3 percent as of March 2017, which was far lower than expected.

To overcome the slow reconstruction pace, JICA introduced a Community Mobilization Programme (CMP) as a pilot in few VDCs. The initial results of the Program were encouraging, hence the Program was later expanded to other areas through various sources of funding.

The major components of CMP are:

1. Recruitment and deployment of over 450 Mobile Masons from the lot of masons who have received 7 days of training on earthquake-resilient techniques and engaged in reconstruction. Each Mobile Mason was assigned to a community to reconstruct around 100 houses.
2. Exchange of authentic and comprehensive information, diagnosing the problems, and preparing the action plan to address those problems through CBRCs workshop/meeting.
3. Support to house owners to manage construction materials, masons/laborers, inspection, and house layout through Mobile Mason, along with continuous assistance from Engineer and Social Mobilizer designated for the whole VDC.
4. Ensuring that all the masons reconstruct houses with the earthquake-resilient techniques with the hand-holding support of Mobile Masons.

JICA noted that the Community Mobilization Programme helped households to navigate the complex processes of accessing financial assistance, and compliance with terms and conditions including building standards, and ensured vulnerable households received additional practical support to progress in their reconstruction.

www.drive.google.com/file/d/1Ew61PRUjGtop5NrlM1g1MTpf5a1iO6KO/view

*Community Mobilisation Programme mobile mason support. Nepal.* ***Source:*** *JICA.*

## Case Study
### Door-to-door technical assistance early after disaster, Padang, Indonesia, 2009

Pictured above, a member of a technical assistance team on the left answers questions for a resident who is unsure what she should do, and what assistance she is eligible for after her home is categorised as damaged, but not destroyed by government damage assessment inspectors.

Door-to-door advice by technical assistance teams helped to bridge communication between authorities and communities, relaying questions and problems up to the government, and relaying answers and explanations down to households.

*Source:* *UN-Habitat.*

## Case Study
### Door-to-door advice on site during reconstruction, Pakistan 2005

Door-to-door teams provided advice for households during construction to ensure they were correctly applying building standards. Advisors discussed with both the household members and with the masons working on the house site, giving practical demonstrations where needed.

Over 1 million house visits were logged by mobile teams, even in remote areas, with records provided of the visit dates and advice provided, for reference by households and analysis by agencies.

*Source:* *Verp Wijaya/UN-Habitat.*

# Mobile technical assistance

## 7.16 Interactive mobile cinema and theatre

Interactive mobile cinema, or mobile theatre, is a public information, education and entertainment event. The programme includes: **1)** jointly prepared audio visual or dramatic content on particular subjects, such as safer construction, **2)** locally-generated content, **3)** live discussions, and **4)** additional entertainment content (audio visual or live).

The event involves local research and participation to capture pertinent questions, local practices, and local representatives. The interactive cinema event may be accompanied with, or linked to, other activities such as the distribution of information materials, training or demonstration sessions, or technical advice clinics.

The scale and complexity of the event can vary according to resources, location and target audiences. This activity can be used for large public gatherings of several thousand people, using open public spaces.

### Target audience

Communities

### Preconditions

Content relating to government policies, standards and programmes should be validated

### Objectives

- Create interest and awareness with a diverse and large audience through interactive and dynamic communication
- Introduce and discuss policy issues, institutional arrangements and local recovery actors
- Introduce accessible visual information on construction improvements and risk reduction
- Collect information on various stakeholders' interests, concerns, and priorities
- Generate a focused event as a memorable shared experience for the community

### Specification

**Inputs:**

- Mobile cinema and mobile theatre activities require specific preparation and presentation expertise. The execution of the events requires logistical arrangements, equipment and expertise.
- Personnel: professional and specialist private sector and assistance agencies can provide both people and/or equipment, depending on the scale and complexity of the programme. Skilled and experienced communication, facilitation and animation personnel are key for the successful implementation of the event itself through strong engagement with the participating audience. A professional team may work by themselves or may work in coordination with, and be supported by, agencies already working in the same area or communities. The support may be logistical, liaison, and substantive in programme development and presentation, including technical or other resource persons.
- Logistics: the simplest use of drama or audio-visual interactive events with relatively small numbers of participants require only performers and facilitators, or the same logistics as a training session. For large scale public events, the logistical requirements increase to include sound systems, lighting, stage, screen and other equipment as well as power supply and transport.
- Timing: the timing of the event should be according to the convenience of the target audience, in the case of open public events, it may be evenings, weekends or other holidays.
- The duration also depends on the target audience. The average for public events is around 2 hours. The organisers need to ensure there is a balance between prepared instructional content, live participation content, and entertainment content, and that all contributions are short and progress on schedule.

# 7.16 Interactive mobile cinema and theatre

## Specification

- If the team and those charged with logistics have travelled to organise the event in a rural or distant location, the programme may divide into a series of activities to optimise the installation (e.g. activities and content aiming primarily at children followed by activities and content mainly for adults).

### Activities and scope:

- Prepared cinema material: Core or common prepared audio-visual material may include recorded interviews (e.g. government policy or statements, technical assistance agency statements), demonstration videos such as step-by-step construction, simple training information (e.g. shake-table demonstrations showing the behaviour of buildings in earthquakes), and information on material selection, correct and incorrect construction.
- Core content may cover a range of topics relating to housing and settlements and not only construction (e.g. what causes hurricanes, sanitation solutions, water management, protection of ravines). Complementary content like water quality testing or hand washing can add to information on community infrastructure and household sanitation. Content may be sourced from a number of different authorities and agencies. Core content should be relatively short pieces with information easily understood by a wide range of audiences, using simple language and narrative or discussion rather than monologue or lecture formats, and optimising the potential of cinema to show large format visual information.
- Prepared theatre material: Core or common prepared theatre material may include short plays, sketches, musical or puppet shows. Drama content will be focused more on stories and explanations than visual content and is useful for discussions and human perspectives (e.g. community experience of the disaster and collective responsibility to build a safer future).
- Locally-generated content: Mobile cinema and mobile theatre teams visit the target area in advance to engage with the community and to develop local content for integration in the programme. This advance preparation may be facilitated and supported by agencies working locally, local government officials, or other contact persons. Local footage, local speakers and local references are very important to generate and hold attention and for the audience to identify with and build ownership of the issues and programme. Local examples and local resource people will help ensure people remember the information afterwards or can follow up.
- The following locally-generated input may be prepared in advance:
  - The history and development of the area, including the experience of past disasters.
  - Previous and current construction or related site visits, information, pictures, and video footage.
  - Collection of frequently asked questions, perceptions, opinions, expectations, and priorities to ensure they are incorporated in the programme content.
  - Interviews with locals, community representatives, selected stakeholders, ordinary people; various answers to a set of fixed questions, their experience, personal story or opinions.
  - Interview with technical assistance agencies and documentation of projects planned or underway in the area.

# 7.16 Interactive mobile cinema and theatre

## Specification

### Live content:

- During advance preparation, identify and schedule topics and participants for live contributions to the programme. As with the production of prepared local content, the team should try to include different target groups in various sections of the programme.
- Identify people to participate in live programme activities, to pose questions, provide answers or for discussion, including local leaders, resource people, local agencies, construction stakeholders, and affected households, etc.
- Facilitate members of the audience to participate, individually and collectively, through portable microphone/camera, recruits from the audience, through live quiz shows, mobile phone applications or other means. Participation may be encouraged or rewarded through small prizes (e.g. phone cards and t-shirts).
- The management of live content requires strong facilitation and communication skills.

### Additional entertainment content:

- The objective of this activity is to attract and hold the attention of a large group of people. The programme may include cinema content with music, sport, cartoons, comedy, history, geography, news or footage of general interest or information. Live entertainment may include music or dance. Live drama content may include comedy, puppets or other entertainment-based content. Many people will attend for the entertainment rather than the learning. The mix will help to make the education and information aspects of the session more digestible, build solidarity in the audience, and make the experience of the event more memorable.
- Activities may be supported by local media actors including local radio stations, journalists, and website hosts in planning and promotion of events and participation in events.
- Events may be recorded for documentation and transfer.

### Feedback, monitoring and reporting:

- Data on event locations, dates and participation should be recorded through standardised information management tools to facilitate aggregation.
- Diagnosis of issues arising in local preparations and in live discussions should be recorded and reported to inform recovery policies and technical assistance. Frequently asked questions and requests for advice should be recorded to address information needs.
- Feedback from resource persons and from participants should be analysed to evaluate event content and communication and issues arising.
- Evaluate the rate of participation in technical assistance activities and adoption of advice provided before and after large events.

## Related activities

The organisation of a large public event represents a significant investment in human and financial resources, and mobilisation of a large number of local people. Where feasible, additional activities may be organised in association with the cinema/theatre event. This may include technical training for masons or others, demonstration models, sessions on material quality, activities with youth and children, technical advice clinics, activities with youth and children, and distribution of printed information materials.

## 7.16 Interactive mobile cinema and theatre

### Benefits/challenges

Interactive theatre and cinema can generate large-scale interest and participation, with accessible communication reaching a wide range of ages and backgrounds.

Large-scale events generate momentum and make recovery a topic for discussion and collective undertaking.

These activities can harness cultural expertise and well-known personalities skilled in mobilising and influencing communities and enable them to play a key role in supporting recovery.

Entertainment events are likely to attract participants who may not be interested in attending training or meetings.

Events provide a platform for local leaders to motivate communities.

These activities can be planned and implemented as stand-alone activities where no support agency is operational, or can be coordinated with local technical assistance agencies and programmes.

Content can be adapted for different audiences and depending on resource persons, timing of events, information needs and priorities.

Communication is in local languages and terminology and provided through familiar communication channels.

Changes in technology have made audio-visual production more accessible, cheaper and higher quality.

One-off events do not provide detailed technical training or follow up.

Cinema and theatre activities require skilled professionals, preparation of resource materials, and logistics support.

The cost is more than for other types of activities, but it reaches larger numbers and with substantial impact.

### Case Study
### Sinema Ba Zetwol "Cinema Under the Stars", Haiti 2010 earthquake

Sinema Ba Zetwol/Cinema Bas Etoiles/"Cinema Under the Stars" was a series of interactive events held in central locations within the heavily destroyed, informal neighbourhoods in Port au Prince after the 2010 earthquake. The sessions included recorded and live interviews with local residents discussing their concerns and discussing with organisations. Recovery topics were combined with local musicians, entertainment, and other content. The event used a large stage and sound system, attracting thousands of participants of all ages over several hours. Events were usually held on weekend nights. They helped to introduce assistance agencies and authorities supporting reconstruction to large, local audiences. They provided practical information and generated debate, as well as signalling that recovery was moving forward.

*Cinema information event for recovery in informal neighbourhood. Haiti.* **Source:** *Sylvain Joachim/Emergency Architects.*

## Case Study
### Puppet show and community events, Development Workshop Vietnam

Puppet animation in Vietnam promoting cyclone prevention measures for safer housing, drew large crowds of all ages. Animation events, plays, puppet shows, and concerts were built around existing cultural themes and events. Animation activities were designed to be 'memorable' and inclusive, with local artists and musicians contributing or performing their own material to the projects. Events included a range of activities to encourage participation by different groups, and included distribution of printed materials, training, and practical advice on site.

*Puppet animation village event in Vietnam.*
*Source: Development Workshop.*

**Mobile technical assistance**

# 7.17 Community visits and exchanges

Community visits and exchanges refer to organised trips by community members from one area to another area, with the objective of learning about the other community's experience of risk or disaster and to share their own experience of risk or disaster.

Community exchanges may inform planning for recovery, monitoring of recovery progress or planning for long-term risk reduction.

Exchange visits provide new learning opportunities for the travelling community and reflection opportunities for the hosting group. Information may be further shared with constituencies the participants represent.

Community exchange visits may be part of wider learning networks initiatives or contribute to policy and programme development.

## Target audience

- Communities
- Local authorities
- Technical and recovery stakeholders

## Preconditions

- International exchanges may require government approval of participants, visas or other measures.
- In-country exchange visits may require security or other clearances.

## Objectives

- Facilitate and promote exchange of experience, expertise and learning between communities
- Promote good practice to targeted audiences through accessible communication mechanisms
- Develop community capacities to articulate and analyse issues
- Develop sustainable networks of cooperation

## Specification

### Locations:

- Community-to-community exchange may form on the basis of communities with shared disaster experiences, risk concerns, or other potential knowledge. Community-to-community exchange should operate in a two-way manner if possible, providing the opportunity for the initial host community to return the visit and learn about the application of lessons learned, advise on options in another context, or provide other support and motivation.
- Exchange visits may be beneficial between communities affected by the same disaster and recovering in the same time frame. Exchange visits may also be beneficial for communities who are recently affected by a certain disaster and visiting communities that were affected earlier and have had a longer experience of recovery.

### Participants:

- Both host and visiting participant groups should be representative of their respective community stakeholders in recovery. Participants may include elected officials and local government staff, community leaders, women, young people, construction professionals and workers, chamber of commerce or business representatives, education and training providers, civil society organisations, and local media. Technical assistance stakeholders including NGOs may also participate.
- Visits may aim to explore specific topics relevant for the concerned individuals and organisations (e.g. households who were relocated after disaster, tourism, cultural heritage and conservation interests).
- Visits may be limited to focused peer exchange (e.g. between local authority personnel).

## 7.17 Community visits and exchanges

### Specification

**Scope and activities:**

- Exchange visits may be organised at different stages of recovery and with different priorities:
  - Early after disasters to inform recovery policies, plans and programmes.
  - During recovery to collect issues and compare progress.
  - During late stages in recovery to discuss institutionalisation, sustainability and continued risk reduction.
- A series of visits over time can enable hosts and visitors to discuss how plans are implemented and to see impacts.
- Exchange visits may be short, informal, same-day visits to communities nearby or may be several days long, scheduled, and formal visits to communities in another part of the country or another country.
- Areas and communities for potential exchange visits should be identified. If feasible, organisation of preparatory visits to plan itinerary and events and to discuss scope is beneficial.
- Visiting community representatives should be selected for participation.
- Host and visiting communities should prepare data to share, in display form, printed documents, videos, photographs and presentations.
- The host community should prepare a schedule of events, site visits, discussions.
- A visit, or a series of visits, should be undertaken and where possible a return visit or series of visits.
- A record of the visit, presentations, project information, discussions and other information should be prepared to share with the wider community of origin. Structured feedback and sharing sessions should be planned.

**Support:**

Community exchange visits may be organised and supported by government authorities, international bodies, institutional donors, humanitarian and development non-governmental organisations, professional bodies, technical or academic institutions, along with those working in the host or visiting communities. Support may include information materials, premises for meetings, transport, accommodation, or other inputs.

**Feedback, monitoring and reporting:**

- Data on exchange visit locations, dates, topics, and participation should be recorded through standardised information management tools to facilitate aggregation.
- Information presented, discussions, and participant observations should be recorded for future reference in order to inform recovery policies and technical assistance.
- Evaluate learning by host and visiting participants.

### Related activities

Training of recovery programme personnel and of local officials may involve participation in exchange visits or acting as hosts for exchange visitors (For further information refer to Chapter 7: Community-Based Outreach, Mobilisation and Engagement).

## Benefits/challenges

Community visits provide opportunities for experiential learning for visitors, enabling them to put information in context. The exposure to other areas, communities and projects is a direct, accessible and memorable means to communicate new information and practices, allowing for direct questions to those involved. Exposure enables visitors to make more informed choices for their own areas.

Through community visits the host community can articulate their needs, plans, actions, intentions, regrets, and learning to a peer group, providing an opportunity for consensus and reflection.

Community visits enable the visiting group to discuss their own challenges and opportunities among themselves as a group as well as discuss new information with their hosts. Being away from their own work and daily routines may enable visitors to focus on learning without distraction and competing demands.

Community visits enable small-scale initiatives to reach target audiences for informed replication and potential scaling up.

Exposure to information in context is usually more informative than information in documents or presented in conference settings. Most documentation is necessarily abbreviated or edited, does not capture the experience of many community stakeholders involved, or only relates to project inputs. The majority of community recovery actors do not have access to the extensive documentation available or the time to read and digest the documentation.

Although exchange visits are time-bound, strong and lasting relationships are often built between representatives with common interests. These relationships would usually not have been forged otherwise.

Facilitated peer-to-peer community learning can be an effective and sustainable model of learning and development.

Community exchange visits are flexible, ranging from informal, short and relatively inexpensive to formal, protracted and requiring considerable inputs. The scope and implementation of community exchange visits can vary according to the resources available.

Comprehensive exchange visits require extensive preparation, facilitation and time commitments by both the host and visiting communities.

Selection of representatives for travel may be contentious among visitors. Confirmation of programmes may be contentious among hosts.

Presentations and documentation frequently include summary information or are euphemistic about recovery projects and their impacts. Visits to the area, direct observation of results, and discussions with those involved yield more detailed information and answers to specific questions and are often more balanced.

Host communities may choreograph visits to showcase only good examples and successes. governments, agencies, and communities may be reluctant to highlight problems, failures or local criticism.

Visiting community members may not pass on the information gathered or lessons learned to their constituencies or wider groups unless there have mechanisms to do so.

## Case Study
### Government engineer from one earthquake area supporting masons in a newly affected province

The photograph featured shows an engineer from the Government of AJK helping local masons in Baluchistan, Pakistan to document local construction processes as part of recovery planning after the 2008 Ziarat earthquake.

*Source: UN-Habitat.*

Engineers from areas affected by the 2005 Kashmir earthquake travelled to Baluchistan after the 2008 Ziarat earthquake as part of the shelter response, and to support needs assessment recovery planning. They were experienced in documenting local housing technologies and diagnosing building failures, as well as providing guidance on hazard-resistant improvement measures. Having experienced destruction and recovery in their own areas, they were able to empathise with recently-affected communities, and provide practical advice on how to organise themselves for reconstruction and what to expect in a time of great uncertainty.

Subsequently, numerous personnel and community members with experience in technical assistance activities after the Kashmir earthquake participated in recovery after the catastrophic floods in Pakistan in 2010 and 2011 across central and southern districts of the country.

**Mobile technical assistance**

# 7.18 Community memorials, histories, commemoration and preparedness events

Community memorials refer to objects (plaques, displays), places (museums, monuments, gardens), or other physical measures to mark disaster events.

Community histories refer to audio, visual, or written accounts to document the disaster event and recovery.

Community commemorations, scenarios, and drills refer to activities organised at intervals to remember the disaster event and disaster impacts, to carry out exercises to support preparedness, or to promote awareness of safety and risk reduction.

Memorials, histories, commemorations, and drills may be organised only at community level, or may be part of wider mass communication programmes and broad mobilisation of several communities, particularly around disaster event anniversaries or designated dates such as an annual launch of hurricane season awareness.

## Target audience

Communities, local authorities, media, civil society stakeholders

## Preconditions

- Anniversaries, fixed dates or mass communication campaigns may determine scheduling.
- Permanent memorial sites may be subject to planning and development regulations.

## Objectives

- Promote continued awareness of the impact of the disaster and experience of recovery through continued visibility, access to information, and through participation in collective activities.
- Promote new awareness for future generations, visitors and others who did not directly experience the disaster or recovery.
- Ensure data and learning from the disaster recovery is maintained.
- Contribute to public preparedness for future disasters.

## Specification

### Locations:

- Memorial sites may be selected on the basis of significance, visibility, access, or other criteria. Community ownership is increased through broad inclusion in decision-making on planning and implementation.
- Permanent documentation or display may be maintained at the premises of local government, non-government, education, or civil society organisations.
- Commemoration events may be organised at any central and convenient locations in the community. Religious ceremonies or government proceedings may determine locations.
- Drills and other activities may be organised at street, village or neighbourhood level and locations. Activities may involve maintenance of flood defences or congregation in location-specific evacuation spaces.

### Activities:

Community memorial objects and places:

- Parks, gardens, or other sites identified, named, designed, or constructed to mark disaster events. Sites may be newly established or modified for purpose.
- Museums or permanent displays of information on disaster impacts, recovery, and risk management. Displays may be outdoors, in dedicated premises, or within other premises.
- Monuments, plaques, public art or other works commissioned to commemorate the disaster event
- Preservation of destroyed or damaged buildings, or other structures or locations

**Mobile technical assistance**

# 7.18 Community memorials, histories, commemoration and preparedness events

**Related activities**

- Mass communication campaigns through broadcast, print or other media.
- Institutionalised commemoration or preparedness events and campaigns.
- Exchange visits for visiting officials and communities. **See 7.17.**
- Activities with young people, schools, and curricula. **See 7.8.**

## Benefits/challenges

### Benefits

A physical place of a disaster event provides a powerful reminder as part of everyday life in a city/neighbourhood/village, especially if the place is accessible and frequently visited or used by the community.

A safe repository for documentation on the disaster and recovery documentation can ensure data is not lost, and can be retrieved for future and long term use. Early dentification of responsibility for local knowledge management can help ensure collection and archiving is more systematic, including from the outset of recovery.

Designated dates for commemoration or scheduled dates for events can successfully mobilise the majority of the community, focusing on a key topic that affects everyone in a concentrated programme of activities, in a short period of time.

Commemoration places and events, histories, and preparedness events can include a wide range of activities and participants, from concerned authorities to school children, both separately and together.

Commemoration and documentation including direct local experiences can ensure knowledge is transferred from one generation to the next, including to those in the community who were young or not yet born at the time of the disaster.

Mass communication campaigns or national programmes can support local efforts. Local initiatives enable people to take initiative and develop activities and resources that are most relevant to their own needs.

Activities initiated locally are more likely to be sustainable, particularly if they are not reliant on large-scale funding, and are focused on maximising participation.

Experiential learning promotes public discourse, enabling individual and collective reflection on shared challenges and opportunities, facilitating the mobilisation of local capacities and resources to take action.

### Challenges

After disasters, authorities, communities and assistance agencies are often too busy to document the disaster impacts, humanitarian response, or recovery. By later stages in the recovery, when they may have more time, resources are often scarce and attention has shifted to new priorities. As a result, data is frequently lost, including valuable technical data and institutional memory. Early identification of the need and processes for managing data can mitigate the risk of data loss.

Commemoration, in the form of places, monuments, events or written histories may be formalized by small constituencies, and not sufficiently inclusive of perspectives and activities by all groups in the community. Events and accounts may be politicised to garner credit or allocate blame or criticism. Balancing conflicting views and constructive inputs is required to adhere to agreed objectives.

Official government programmes or events may stifle community initiatives to plan and implement their own activities.

Some activities require considerable resources. Establishing museums, parks, monuments or archives requires investment, which may be mobilised from several sources and justified in terms of continued impact.

Disaster preparedness including maintenance of flood infrastructure may require resources and action on the part of authorities or communities. Without clarity on who should do what, and who can do what, and without access to resources, many necessary activities may not happen, resulting in frustration and exposure to risk.

Turnover of officials and assistance agency personnel may result in loss of institutional memory and loss of interest in commemoration, history and preparedness activities. Disaster-affected communities may also experience outward and inward migration, resulting in loss of collective memory. However, as the primary stakeholders impacted by disasters, involved in recovery and at future risk, disaster-affected communities should be the primary stakeholders leading commemoration, history and preparedness activities.

## Case Study
### The Great Hanshin-Awaji Earthquake memorial museum, Disaster Reduction and Human Renovation Institution

The Disaster Reduction and Human Renovation Institution (DRI) was established in Hyogo Prefecture in April 2002 with the support of the Government of Japan, and is operated by the Hyogo Earthquake Memorial 21st Century Research Institute.

At the DRI, the goal is to spread the word about a vital phase of local history and ensure that the lessons of the Great Hanshin-Awaji Earthquake are never forgotten. Big-screen footage and soundscapes are used along with recreations of the earthquake using special effects and computer graphics, allowing visitors to experience the terrifying power of the earthquake, and a broad range of materials show how the region has rebuilt their lives. Moreover, games and experiments are available to allow visitors to learn about disasters and how to minimize risk and damage in the future.

The DRI advocates that disaster management and mitigation are not just a problem for national and local governments to handle, they are a local community issue for each and every one of us.

The DRI promotes efforts to improve society's disaster management by forming diverse networks that include government officials, researchers, citizens, and companies involved in the Great Hanshin-Awaji Earthquake or in disaster management, as well as providing a venue of international collaboration.

## Case Study
### Annual Earthquake Safety Day, Nepal

Nepal marks Earthquake Safety Day (ESD) every year on 15 or 16 January (Magh 2 according to the Nepalese Calendar), commemorating the Great Nepal-Bihar Earthquake of 1934 by organizing various activities nationwide. The main purpose of marking this day is to reaffirm their national commitment to enhance earthquake resilience of Nepali communities, share and review past experiences, and further strategize.

The Earthquake Safety Day national committee is led by the Ministry of Home Affairs (MOHA), accompanied by representatives from various government and non-government agencies related to disaster risk reduction, emergency response, and critical facility management. Earthquake safety awareness activities take place in all 77 districts of the country as a collaborative effort among various stakeholders and communities.

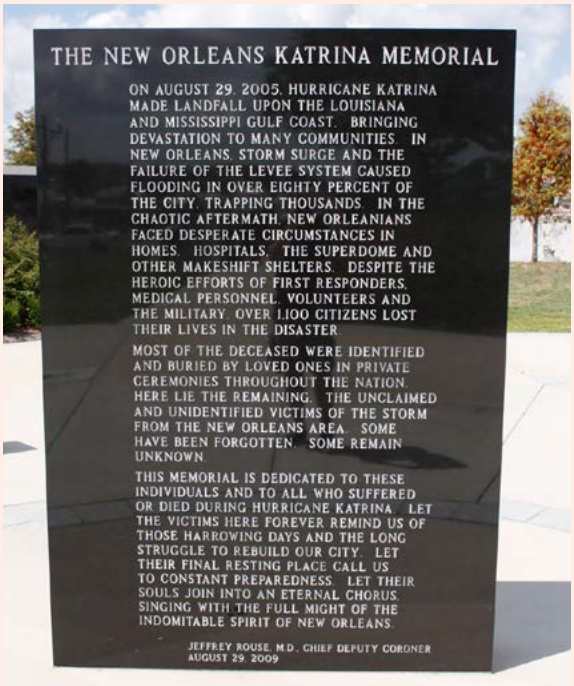
*Shake table demonstration at Earthquake Safety Day events. Nepal.* **Source:** *NSET Nepal.*

## Case Study
### Hurricane Katrina memorials

In memory of those who died in Hurricane Katrina in 2005, a series of granite memorials have been erected by communities along the gulf coast of the United States, in the states of Louisiana and Mississippi. Lists of names of those who died and those missing locally are engraved on the back or front of each memorial.

The memorial in the town of Biloxi, Mississippi stands twelve feet tall–about the height of the water during Hurricane Katrina's storm surge at the town green–and contains a tile inlay of a wave, a glass case containing various items from destroyed buildings, and the names of the 170 victims who perished during the storm.

A memorial in the cemetery of the Charity Hospital in New Orleans, Lousisiana commemorates unnamed victims. Visitors to New Orleans can take guided or self-guided tours to visit key sites to learn about the impact of the hurricane and flooding, and about the recovery afterwards.




*Hurricane Katrina Memorial in New Orleans, Louisiana, USA.*
**Source:** *UN-Habitat.*


*Collecting data on paper.*
**Source:** *TECHO.*

# CHAPTER 8
# Baselines, monitoring and evaluation, accountability, and quality assurance

## Introduction

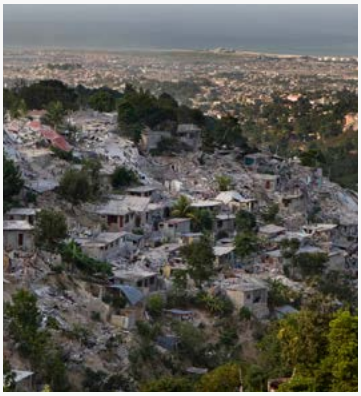
This chapter discusses the information needed for the effective design, operation, and evaluation of technical assistance programmes and activities. The information discussed includes both the preliminary data required to effectively plan technical assistance activities (e.g. damage assessments) and establish baselines from which activities can be evaluated, as well as that which is collected throughout the implementation of programmes and activities so that evaluations can be conducted.

The chapter is broken into five primary sections:

1. *Strategies for assessments, monitoring and evaluation, and quality assurance*
2. *Damage assessments, safeguards and baselines. Information needed to efficiently plan and measure the effectiveness of technical assistance activities (baselines)*
3. *Monitoring and information management systems. Data gathered, and mechanisms established, in order to link activities to each other and assess the performance of various combinations of activities*
4. *Guidance for monitoring activities*
5. *Quality assurance. Processes ensuring consistency of technical assistance activates over different regions or partners as well as adherence to minimum construction standards and/or materials*
6. *Evaluation, accountability and learning. Studies conducted to understand the efficacy of technical assistance activities (evaluations), provide transparency regarding programming to government, donors, affected communities, media and the public (accountability) and documentation of lessons learnt to ensure improvements in future contexts (learning)*

In practice, these activities are undertaken concurrently though they are presented as independent topics herein for clarity. All of these information-related activities are interdependent, and most have a degree of overlap with each other. Some assessments are meant to indicate the effect of technical assistance activities on non-construction-related aspects (social and environmental assessments). It is likely that not all information will be available (i.e. not all assessments will be completed), and that different organisations will be responsible for different assessments. Therefore, establishing a joint information management system, which aims to collect as much data as possible, is crucial.

*Block testing taking place at the Central Material Testing Laboratory in Nepal.* **Source:** *HRRP.*



*Damage to informal neighbourhoods in Port au Prince after the 2010 Haiti earthquakes.* **Source:** *MINUSTAH.*

# Why does it matter?

Having sufficient information on a technical assistance programme and individual activities is important to plan, adjust and improve activities both in real time and in subsequent contexts. Key information include the identification of logistical bottlenecks or market fluctuations (e.g. rising prices), enable tracking of whether information is being communicated to target audiences and to what extent, and can provide the medium through which to demonstrate government transparency and provide reassurance to the public and donors. Consequently, the absence of such data can have serious repercussions such as:

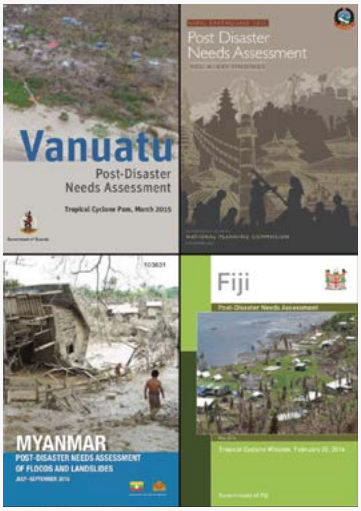
- Gaps in (geographical) coverage, with some areas receiving little or no support and other areas being overwhelmed with support
- Concentration of resources. Similar as above, resources might end up concentrated in one type of activity or area
- Not identifying bottlenecks or problems like price rises, non compliance, etc.
- Not being able to see whether information is effectively communicated


*Monitoring reconstruction.* **Source:** *UN-Habitat Indonesia.*

However, perhaps most critically, housing recovery is an iterative process, and any effective response must incorporate how communities, households and individuals are coping and/or reacting within the recovery process. To do so efficiently and effectively requires a means to track and aggregate information to understand the prevalence, severity, and location(s) of issues.

Baselines and other social and environmental assessments are crucial because:

- As information on needs is derived from damage assessments, and needs-related findings are subsequently fed into recovery plans (in which the housing sector plays a crucial role), without such information an effective recovery strategy cannot be devised.
- Similarly, the collection of baseline data on the housing sector is required for measuring the effectiveness of activities. Without reliable baseline data, accurate monitoring and evaluation of activities becomes far more challenging.
- Social and environmental safeguards are assessments measuring the impact of any programme or activity (including technical assistance activities) on certain social and environmental elements (e.g. assessing whether or not the proposed reconstruction scheme is detrimental to the environment or the financial assistance scheme discriminates against women), the importance of which should be self-evident.




*Covers of post-disaster needs assessments.* **Source:** *GFDR.*

Finally, in order for these data to be used effectively, they should be made widely accessible to all stakeholders, preferably through a centralised, consolidated information management system, fed by all actors involved in technical assistance (and other reconstruction) activities. In this way, the information can contribute to programme and project evaluations, and, if information is additionally made available to beneficiaries, support accountability.

# 8.1 Strategy for assessments, monitoring and evaluation, and quality assurance

Strategies are multifaceted and comprised of numerous actions actions that greatly depend on context.

| | |
|---|---|
| **Assessments and baselines** | • Determine what pre-disaster data are available.<br>• Determine which post-disaster assessments are being done, including damage and needs, capacities and vulnerabilities.<br>• Determine which other assessments are crucial for informed programme design (safeguards).<br>• Determine which data are needed for a workable baseline, and assess what part of that data is already available..<br>• Assess capacity of government and non-government stakeholders to collect, analyse and manage data.<br>• Assess requirements to restore, establish or expand data management capacity. |
| **Monitoring and information management** | • Make a data collection strategy for the technical assistance programme and individual activities, tracking not only activity result but also wider issues like construction material prices, government expenses, geographical coverage of the technical assistance, topic-coverage of the technical assistance, expenditure on technical assistance.<br>• Determine who will host and organise the information management system.<br>• Consider the trade-off between investment in data collection and investment in other measures.<br>• Plan for retention, sharing and institutionalization of data to optimise the investment. |
| **Quality assurance** | • Determine what processes and outputs need quality assurance.<br>• Determine what standards to use for quality assurance activities. |
| **Evaluations** | • Determine what questions you want answered.<br>• Set up evaluations in coordination with other relevant partners. |

## Risks and challenges

### Damage and needs assessments, baselines, and monitoring

- Not coordinating in time or regarding when to collect what information with relevant stakeholders
- Collecting too much information that is not used
- Not sharing information with other stakeholders, leading to several stakeholders collecting the same information/ not having a central IMS
- Not adjusting the survey method to the context or the capacity of the surveyors
- Not doing a baseline is a big risk. Retroactively doing a baseline is close to impossible

### Safeguards

- Not doing the necessary safeguard assessments, and therefore running the risk of unintentionally causing negative effects.

### Quality assurance

- Not doing any quality assurance is a great risk in case of a future disaster as the quality of key components (construction materials) might be sub-par
- Not doing quality assurance runs the risk of technical assistance activities varying in quality over different regions or different partners

## 8.1 Strategy for assessments, monitoring and evaluation, and quality assurance

### Factors to consider

#### Assessments and baselines

- What partners are operating in the context and what is their capacity?
- What baseline data is easily available, what needs to be collected from scratch?
- What funding is available to do assessments?

#### Monitoring and information management

- Capacity of surveyors
- Technological characteristics
- Is there a form of an information management system already that could be adapted to also include the housing reconstruction information?

#### Quality assurance

- What current quality standards are being used?
- What experience do stakeholders have with working with standards?

#### Evaluations

- Available funding

# 8.2 Starting out: assessments, safeguards, and baselines

Technical assistance programmes are based on information about the disaster and the context. There are several tools and mechanisms available to provide this information. Some information will have to be especially collected to establish a baseline for monitoring and evaluation.

## Damage and needs assessments

Approaches to post-disaster assessments vary from context to context, and between organisations. Damage assessments and needs assessments will often be carried out separately following different approaches and with different skills required for the enumerators.

Below an overview of damage and needs assessments in rough chronological order:

For needs assessment, the **Multi-Cluster/Sector Initial Rapid Assessment (MIRA)** is a UN OCHA tool that was designed to identify strategic humanitarian priorities during the first weeks following an emergency. The MIRA aim is that "all humanitarian actors reach, from the outset, a common understanding of the situation and its likely evolution."

Several clusters still have separate, sector-specific needs assessments which can also be conducted. For example, the Shelter Cluster works with REACH to conduct **shelter sector needs assessments** immediately after a disaster, and to repeat these assessments at agreed times. Most organisations will also carry out their own needs assessments to either define working areas or collect more details on decided work areas.

There is a risk that needs assessments can become uncoordinated and generate significant amounts of unused information. There may also be challenges if information collected from different needs assessments presents contradictions or different requirements. Needs assessments can also be time consuming for households, especially if the same household is asked to participate in multiple assessments, at a time when they are trying to deal with the aftermath of a disaster. The Humanitarian Country Team (HCT) and cluster coordinators have a responsibility to bring together the collected needs assessment data and define a common understanding of the situation. Often the timing of the humanitarian needs assessment process does not align with the government-led Post Disaster Needs Assessment (PDNA) process. The impact of this potentially staggered assessment (e.g. in regards to data collection, demands on beneficiaries, etc.), should be considered.

**The Post Disaster Needs Assessment (PDNA)** is a government-led process which draws upon the capacity and expertise of national and international (EU, World Bank, UN) actors, who provide technical support and implementation capacity as requested. It typically results in the following products:

- A damage and needs assessment that presents a cross-cutting, comprehensive assessment of the impact of the disaster per sector
- A Preliminary Recovery Strategy that outlines a vision for recovery
- A resource mobilisation tool
- An outline for a recovery process

Damage assessments can be carried out using a number of different methodologies with different objectives. In some cases, damage assessments may not be carried out at all. In other cases, damage assessments have an important role in determining eligibility for financial assistance from the government, which can present many complexities, particularly when conducted at a large scale.

The products of all assessments are important sources of information for the design of a technical assistance programme. Not only do they provide key information about the extent and location of the damage, it is also important that the technical assistance strategy is an integral part of the general national and local recovery strategies, for which these tools provide a mechanism.

## 8.2 Starting out: assessments, safeguards, and baselines

### Safeguards

Safeguards (or safeguard policies) are mechanisms for integrating environmental and social issues into decision-making. The safeguard policies were implemented in the 1980s, after a couple of World Bank-financed projects caused displacement and disruption of livelihoods in several communities in south Asia. The most widely used safeguard policies are those of the World Bank.[1] Safeguard policies are meant to ensure that bank-supported lending operations minimize any adverse impacts on local people, their livelihoods and culture, and the environment.

The safeguard policies provide a framework for consultation with communities and for public disclosure.

An important part of the safeguard policies are social and environmental impact assessments, which are mandatory mechanisms for evaluating World Bank-financed projects during design, implementation and completion.

Per October 2018, the World Bank adopted a new set of environment and social policies called the Environmental and Social Framework (ESF). This is a complete overview of the new Environmental and Social Framework (ESF) standards:

| | |
|---|---|
| **1** | ESS1 Assessment and Management of Environmental and Social Risks and Impacts |
| **2** | ESS2 Labour and Working Conditions |
| **3** | ESS3 Resource Efficiency and Pollution Prevention and Management |
| **4** | ESS4: Community Health and Safety |
| **5** | ESS5: Land Acquisition, Restrictions on Land Use and Involuntary Resettlement |
| **6** | ESS6: Biodiversity Conservation and Sustainable Management of Living Natural Resources |
| **7** | ESS7: Indigenous Peoples, Historically Underserved Traditional Local Communities |
| **8** | ESS8: Cultural Heritage |
| **9** | ESS9: Financial Intermediaries |
| **10** | Stakeholder Engagement and Information Disclosure |

The ESF assessments can provide key information on what social and environmental risks are most present in the context and need to be addressed in the technical assistance programme activities. For example, if the environmental assessments show an adverse effect of the use of a certain common building material, the use of this material should not be promoted in any technical assistance activities.

For sustainability of construction, the 'Quantifying Sustainability in the Aftermath of Natural Disasters' (QSAND) tool was developed. The QSAND is an assessment tool that aims to provide a coordinated framework for identifying and assessing the sustainability of solutions in the relief, recovery and reconstruction in disaster-affected communities. The assessment can then guide and inform the decision-making process in a disaster-affected community, promoting more sustainable approaches for shelter and settlement activities.

[1] Although other development banks have similar instruments, discussion of safeguards herein will focus on those utilised by the Word Bank.

## Baselines

A baseline assessment provides a fixed starting point for the intervention against which progress can be measured. When all actors use the same baseline, the effectiveness of different interventions can be compared. In order to later evaluate the effectiveness of the technical assistance programme, having reliable and comprehensive baseline information is crucial.

Pulling together existing data on pre-disaster housing and construction practices is an important part of developing a baseline. Conducting a baseline should be a priority for any technical assistance programme, as this will indicate the impact, if any, of technical assistance activities. Monitoring in relation to the baseline can also inform many decisions about the content of the intervention as the programme proceeds.

The routine baseline data on private housing collected before a disaster is often weak, both quantitatively and qualitatively. This is especially the case when the qualitative information required to be recorded in reconstruction (such as documentation of construction types, seismic safety or services, latrines and household water supply) has not been anticipated or incorporated previously in surveys. This information is difficult to reconstitute after a disaster. Private housing, and particularly rural housing, is generally not well documented in most countries as it often lies outside the scope of regulation and interest of local authorities. Neither the quantitative information (how many houses and where), or the qualitative information (construction typologies, quality and condition) are normally collected.

However, despite the rarity of finding pre-disaster data on private housing through local authorities, these data can often be found through the World Housing Encyclopedia (http://www.db.world-housing.net/) and through other relevant sources in the country such as universities, researchers, construction companies, construction material vendors and producers, engineers, etc. The international NGO Craterre are developing Local Building Culture Country Profiles, which if available, could provide useful information on pre-disaster construction context. These country profiles provide an overview of local construction practices.

An example of a baseline survey approach collecting data from scratch is the Knowledge Attitudes Practices method. Because this type of baseline covers both the technical state of the houses (documenting construction practices) and attitudes/knowledge of the population, it is a useful baseline to later measure the effectiveness of all sorts of reconstruction activities against.

Baseline information should not only be collected on housing indicators. Environmental planning should have formalised and clear baselines, objectives, targets, indicators, funding and monitoring systems too. Without formal status, environmental issues can be easily neglected or dropped. Prioritising what data is to be collected is key, as after a disaster there often is limited capacity available for data collection. In other words, collecting the right information should be the aim, not collecting complete sets of information, as there is often very limited time and capacity to analyse and use information later.

### Case Study
### Dealing with missing baseline data

The baseline data available in Pakistan after the 2005 earthquake was limited. This had two consequences, the first was that documentation of the pre-disaster situation had to be done post-disaster which helped to inform programming, but did not establish a quantitative baseline due to insufficient reporting; the second was that the programme was designed primarily to be measured on inputs and short-term results rather than measuring the longer-term adoption of safer construction practices.

From the outset of the programme, missing baseline data raised difficulties for information management and for monitoring and evaluation. For example, the number of houses destroyed and damaged in the earthquake was higher than the number of existing houses, according to the census. The standardisation of village names and their spellings, and the confirmation of union council boundaries for mapping were all required to establish an agreed upon and operational baseline for the housing programme.

The importance of a baseline of previous construction was not only to compare the pre-disaster and post-reconstruction situation, but also to assist the programme development and implementation. Baseline knowledge of the types of materials, technologies, and skills previously used and available in respective locations could have provided valuable indication of likely patterns of choices for reconstruction, and consequent patterns of training and technical support needs.

## Assessments needed for technical assistance activities

The table below gives an overview of what assessments are linked to which technical assistance activities. In other words, what information about a certain topic is needed before activities can be planned.

| Element (chapter) | Assessments to be done | Plans to be made |
|---|---|---|
| **Institutional** | • Pre-disaster government capacity, premises, personnel, funding, policy and regulatory systems, at central and local levels.<br>• Disaster impacts on government functionality<br>• Requirements for temporary restoration of government functionality<br>• Requirements for strengthening or expansion of government capacity to manage recovery<br>• Pre and post-disaster capacity, of built environment sector<br>• Pre- and post-disaster capacity of assistance agencies | • Restore immediate or temporary government, built environment and assistance operations.<br>• Mobilise institutional stakeholders and resources<br>• Define institutional arrangements to manage recovery and communicate those arrangements<br>• Develop institutional capacity to manage recovery<br>• Define strategies for institutionalisation, or exit strategy for recovery arrangements |
| **Policies** | • Pre-disaster policies, standards, regulatory systems.<br>• Pre and post-disaster population data<br>• Pre and post-disaster housing data: numbers, types, condition, status | • Mobilise policy, programme, and standards stakeholders<br>• Define recovery policies including key government programmes.<br>• Define validation mechanisms for policies, standards and for programmes.<br>• Review and revise existing and define new regulations, standards and guidance |
| **Finance** | Financial services<br>• Pre and post-disaster financial services assessments, operators, capacity, coverage, products, participants.<br>• Prevalence of bank accounts<br>• Levels of savings, debts, incomes, remittances<br>• Insurance coverage<br><br>Financial assistance<br>• Social transfer systems<br>• Government funding, levels, terms and conditions<br>• Non-government funding, levels, terms and conditions | • Mobilise financial assistance and financial services stakeholders and resources.<br>• Define financial assistance strategy for shelter, housing reconstruction and repair, land and resettlement, settlement/ community rehabilitation and development.<br>• Define financial assistance strategy for housing sector recovery and development<br>• (Strategies to include scope, levels, eligibility, terms and conditions)<br>• Define financial disbursement, reporting and accountability mechanisms |

## 8.2 Starting out: assessments, safeguards, and baselines

| Element (chapter) | Assessments to be done | Plans to be made |
|---|---|---|
| **Training** | • Pre-disaster policies, standards, curricula<br>• Pre- and post-disaster training capacity assessment, including requirements for restoration or expansion of training capacity<br>• Training needs assessment, numbers, knowledge, skills | • Mobilise training and capacity building stakeholders and resources<br>• Define training strategy, target numbers, profiles, time frames, knowledge and skills, formal and informal capacity development.<br>• Define validation mechanisms for curricula, certification |
| **Mass comms** | • Pre- and post-disaster media capacity, coverage and access assessment<br>• Requirements for restoration or expansion of media capacity<br>• Communication channels | • Mobilise media stakeholders and resources<br>• Define institutional leadership and coordination mechanisms<br>• Define validation mechanisms.<br>• Define mass communication strategy for dissemination of policy |
| **Field outreach** | • Pre- and post-disaster capacity of local government and non-government premises, staff and operations<br>• Pre- and post-disaster capacity of local construction sector (markets, producers, vendors, professionals)<br>• Household and community structures and dynamics | • Mobilise field outreach stakeholders and resources<br>• Define institutional leadership and coordination mechanisms. |

# 8.3 Monitoring and information management systems (IMS)

In order to be able to judge the success of any programme, its activities will have to be monitored and the results of these activities will have to be assessed. This is commonly referred to as M&E (monitoring and evaluation) or sometimes Monitoring, Evaluation, Accountability, and Learning (MEAL).

*"Monitoring and evaluation shouldn't be confused with each other. Monitoring is the routine, daily assessment of ongoing activities and progress, while evaluation is the periodic assessment of overall achievements. Monitoring looks at what is being done, whereas evaluation examines what has been achieved or what impact has been made"* **(World Bank 2010).**

A technical assistance programme consists of many activities (see chapters 3 to 7), each of which have their own monitoring activities. However, the programme as a whole is monitored too, in order to link activities to each other, and to eventually be able to draw conclusions on what combinations of activities work well, or where progress is stalling, or what training is most effective in summer, among other topics.

The table below gives an overview of how monitoring and evaluation can be applied in each individual chapter.

| Element (chapter) | Monitoring + MIS | Evaluations | Overarching |
|---|---|---|---|
| **Institutional** | • Information on institutional arrangements, locations, contacts<br>• Monitor institutional capacity (premises, staff numbers, knowledge and competencies, systems, funding)<br>• Data on government and non-government stakeholders, including institutional support and capacity building<br>• Data on resources, allocation and disbursement<br>• Data on proposed and actual projects, location, timing and activities<br>• Monitor institutional performance (decision making, availability of services, transparency and accountability etc.) | • Evaluate efficiency and effectiveness of institutional arrangements, coordination and management of recovery.<br>• Evaluate lessons learned for future disaster recovery management | |

## 8.3 Monitoring and information management systems (IMS)

| Element (chapter) | Monitoring + MIS | Evaluations | Overarching |
|---|---|---|---|
| **Policies** | • Information on policy, standard s and guidance information<br>• Data on recovery progress, repair and reconstruction, rate of completion, rate of compliance<br>• Data on housing typologies and construction technologies and practices<br>• Data on material, labour and construction costs<br>• Analyse factors in non-compliance, types and prevalence of non-compliance<br>• Monitor market functioning, factors in price variations and in inflation | • Evaluate adequacy of standards and guidelines to cover typologies and practices and to address information needs<br>• Evaluate institutionalisation of regulatory measures | |
| **Finance** | • Information on financial assistance available, eligibility criteria, terms and conditions<br>• Monitor financial disbursement in relation to reconstruction progress (rate and compliance)<br>• Data on insurance levels and disbursement<br>• Data on credit, including savings and loan groups, formal and informal debt<br>• Monitor access to financial services<br>• Monitor use of financial assistance<br>• Monitor economic recovery at macro and micro levels | • Evaluate efficiency and effectiveness of social safety net systems<br>• Evaluate impact on longer term participation in banking and insurance<br>• Evaluate lessons learned for the use of financial services in future disaster recovery | It is almost impossible to judge the effectiveness of one type of activity in altering the construction practices of an area. Tools like the KAP do not look at one activity group, but instead use a baseline and follow up surveys to assess whether/ how construction knowledge, attitudes and practices have changed without assigning that change to any particular activity. |

## 8.3 Monitoring and information management systems (IMS)

| Element (chapter) | Monitoring + MIS | Evaluations | Overarching |
|---|---|---|---|
| **Training** | • Information on training providers, training available, certification<br>• Information on curricula<br>• Data on training provided<br>• Data on training of trainers<br>• Data on training participants<br>• Data on training costs and funding<br>• Monitor application of training in relation to compliance with building standards<br>• Monitor supply of and demand for various trainings | • Evaluate knowledge and competencies of trainers<br>• Evaluate knowledge and competencies of training participants<br>• Evaluate cost effectiveness of training activities | It is almost impossible to judge the effectiveness of one type of activity in altering the construction practices of an area. Tools like the KAP do not look at one activity group, but instead use a baseline and follow up surveys to assess whether/ how construction knowledge, attitudes and practices have changed without assigning that change to any particular activity. |
| **Mass comms** | • Information on communication providers<br>• Information on communication products<br>• Data on information product distribution<br>• Data on listenership, participation, customers, usage and other access to media<br>• Data on media costs and funding<br>• Monitor coverage and gaps of communication providers<br>• Monitor profiles of audience/participants<br>• Monitor information needs | • Evaluate impact of media activities and products<br>• Evaluate cost effectiveness of media activities | It is almost impossible to judge the effectiveness of one type of activity in altering the construction practices of an area. Tools like the KAP do not look at one activity group, but instead use a baseline and follow up surveys to assess whether/ how construction knowledge, attitudes and practices have changed without assigning that change to any particular activity. |

## 8.3 Monitoring and information management systems (IMS)

| Element (chapter) | Monitoring + MIS | Evaluations | Overarching |
|---|---|---|---|
| **Community/ field outreach** | • Information on field outreach providers, organisation details, location, programmes and budgets.<br>• Information on specifications/guidance for field outreach activities.<br>• Data on completed/ upcoming activities, outputs and results<br>• Data on activity costs and funding<br>• Monitor coverage and gaps of field outreach providers and activities.<br>• Monitor profiles of audience/participants in field activities<br>• Monitor information needs | • Evaluate impact of field outreach activities<br>• Evaluate cost effectiveness of field outreach activities | It is almost impossible to judge the effectiveness of one type of activity in altering the construction practices of an area. Tools like the KAP do not look at one activity group, but instead use a baseline and follow up surveys to assess whether/ how construction knowledge, attitudes and practices have changed without assigning that change to any particular activity. |

Monitoring (and evaluations) can require significant time and resources but is crucial for informed decision-making.

### Monitoring and data collection

Monitoring activities collect the right data ('what do we need to know?'), delivers it to the right people, and does so in a time and cost-effective way. A good monitoring system involves the beneficiaries of the intervention and takes cross-cutting issues into account.

- The scale and design of a monitoring system varies widely with the scale and scope of the to-be-monitored intervention. For instance, a very small project may entail a daily walk through a neighbourhood by the project manager, while a national programme incorporates a cloud-based information management system.
- Monitoring can demand significant budget that can also be spent elsewhere, so be selective in what information is collected.
- The selected indicators (note: each activity will have its own indicators which are decided in the activity planning) will determine the focus of the monitoring. This presents a risk of losing sight of other important aspects.
- M&E needs to be responsive and investigative to identify issues and provide substantiated field information to help support policy development and project management.
- If the M&E system of the intervention is not embedded in the institutional environment there might be a limited engagement on policy development, monitoring of progress, and evaluation or consideration of impact, sustainability or institutionalisation.

In many contexts, the government's primary monitoring tool will be the Post Disaster Recovery Framework (DRF). The DRF was developed in 2016 to ensure greater predictability, clarity, and consensus on institutional arrangements, policies, and programmes to facilitate a smooth recovery process and to improve resilience for the future. Guidance for preparing DRFs builds on the PDNA approach and includes methodologies for local as well as national authorities and thematic notes for specific sectors including housing. DRF tools are flexible so countries can adapt to their own contexts. A comprehensive DRF may be prepared for all sectors or individual sectors may develop frameworks separately. The DRF is designed to cover all actors involved in the recovery process; government and non-governmental (i.e. communities, NGO, and private sector).

Assistance agencies will also have their own individual monitoring frameworks in place for programmes supporting housing recovery. Through these frameworks they collect a lot of information that might be relevant to other stakeholders. However, information collected by individual assistance agencies is rarely shared, so some effort might be necessary to use/include this information.

## The cost and the value of data

Data collection and processing can require massive resources in time and personnel. A data vacuum can become a preoccupation for all types of organisations. In conditions of urgency, dilemmas arise around data collection, processing and analysis. Are they data we need or data we want? What question do the data answer? Whose question do they answer? Are decisions made based on experience and expertise as much as on data? Are we operating according to methods borrowed from data-rich contexts? What do data cost? Could those resources be spent more directly on tangible outcomes? Are the data only for project decisions or are they more strategic and durable? Is there an obligation or a plan to make data available? To whom? How? When? What will they be used for?

It is a common experience in humanitarian and development programming that assessments, project data, reports and evaluations are routinely generated and lost. Solutions to both project and research data availability require greater focus on institutionalization along with options for supplementary mechanisms such as country or crisis-specific platforms to enable aggregation, exchange and continued access (see the next section).

### Case Study
### The case for qualitative research approaches in housing recovery

Post-emergency data in housing tends to be mainly quantitative, focusing on the number of displaced people, number of destroyed houses, and the cost of reconstruction. However, if the aim is to better understand (urban) housing systems during crises, there is a large role for qualitative data as well.

Housing systems are made up of households. Housing is particularly amenable to research from the household level, learning about the choices people make; if, how and why they adapt; their motivations and priorities; looking longitudinally at their pathway through recovery; and watching change, accelerated change, change under stress, and learning from it. Qualitative research can be quick and dirty, agile, flexible, low-cost, and is able to capture and disaggregate diversity. Qualitative data can enrich the quantitative (big) data in explaining the patterns within it, helping everyone understand what's going on, instead of just counting numbers.

## Data collection methods

There are many ways of collecting data, and new technological developments could make this process a lot easier. However not all (technologically advanced) methods are suitable for all contexts. The context needs to be carefully considered when choosing a data collection method. This goes for both hardware (the data collection devices, anything from paper surveys to tablets) and software (the programs running on the devices and the software processing the data).

Consider questions like:

- What is the 'computer literacy' level of the people collecting the data? Will the limit the people that can be hired to do the data collection work?
- Can devices be charged in the field? Will screens be readable in harsh sunlight?
- Are devices vulnerable to theft?
- Will data collectors be forced to work with parallel systems because other agencies require paper copies of surveys?
- Will data be secure on the devices? How does the transfer of the data work?
- Is the software sufficiently secure? Excel for example is used a lot, but does not comply with security standards for confidential data (better to use access).

### Case Study
### Data collection with tablets and/or smartphones

Data collection using tablets or smartphones can have great advantages (like speed, and the ease of data analysis and incorporation into the MIS), but the details need to be thought through. Charging opportunities, the use of mobile data, and the vulnerability of the devices are all concerns. In some cases, paper forms of data collection remain obligatory, increasing the workload for the surveyors. If digital data collection is not an option, paper surveys should be well-designed.

*Collecting data with a smartphone.*
**Source:** *Red Cross Antigua.*


*Collecting data on paper.*
**Source:** *TECHO.*

## Information management systems (IMS or MIS)

In complex housing recovery programmes, the monitored information needs to reach a lot of actors and inform many activities. Therefore, having a good information management system is key. Information management is the process of collecting, processing, analysing, and sharing information from and among various stakeholders. An information management system (IMS)[2] is a tool for collecting, monitoring and enriching information either about a specific project or the recovery process. Data from the information management system can inform the decisions of many stakeholders. Ideally, government decides on an agency (for example a ministry or the shelter cluster) to coordinate information management and set up an information management system. The organisation coordinating the information management should work with agencies and communities involved in relief and reconstruction to establish a joint information management strategy, which should include rules, protocols, procedures, and locations for the sharing, storing, and disclosure of information.

An information management system can take many forms. It tends to follow software trends (embracing up-to-date and innovative technologies) but also needs to function at basic levels for a range of users of varying capacities and skills. The system should be able to incorporate many data formats (GIS, surveys, national identification or address systems), and be accessible from the field. Off-the-shelf solutions exist, though for bigger projects it may be prudent to build a customised system.

Other key points include:

- *Timely and efficient.* Information management needs to be timely in the service of the beneficiaries and to ensure decision makers can take timely action.
- *Transparency and accountability.* Transparent information management systems can provide credibility and accountability to government, donors, affected communities, media and the public.
- *Quantitative data needs to be supplemented by qualitative data.* Analysis capacity is as important as data input/processing capacity.
- *Dissemination.* A range of media should be used to support dissemination of information to affected communities.
- *Capacity building.* Working with the information management system might be an asset for local project staff. Expect all local project staff to work with the system but don't expect them to have sufficient information, communication and technology (ICT) skills at the start of the project.

## Monitoring systems in practice

In the aftermath of a disaster, if the clusters are activated the Shelter Cluster will establish a 4W (who, what, where, when) system to monitor agencies' activities. The data gathered the 4W system can be used to identify gaps (or duplications) in coverage and may be used by agencies to determine where to work. The data collected are likely to focus initially on emergency/temporary shelter support but may also relate to recovery activities (e.g. training, orientations, door-to-door visits, etc.).

One of the challenges with the 4W system is that government activities are generally not tracked alongside agency activities, which often results in generated information providing only a partial picture of the situation. For example, following the April 2015 earthquake in Nepal, cash grants provided by government for temporary shelter were not tracked through the 4W, despite the government being the largest provider of the shelter grants.

Where governments are disbursing cash grants for housing reconstruction/retrofit, IMS will be required at multiple levels and involve many stakeholders making it complex to establish and manage. For example, in Nepal there are multiple IMS related to the government's financial assistance for housing reconstruction:

- Technical data are collected and held by the Building Central Level Programme Implementation Unit (CLPIU).
- Data on disbursement of financial assistance are collected and held by the Grant Management and Local Infrastructure (GMALI) CLPIU.
- Banks collect and hold data on release of financial assistance to bank accounts.
- The National Reconstruction Authority collects and holds data collected through the damage assessment.

[2] Or Management Information System (MIS)

## 8.3 Monitoring and information management systems (IMS)

Data collected on construction practices can be very valuable and contribute to effective targeting of technical assistance. Data collected can supporting the following activities:

- Detailed information on building typology, which allows for the targeting of technical information and types of demonstration buildings.
- Information on construction rates, which can support with planning inspection visits.
- Scaling up or down of technical assistance activities.
- Support of market monitoring.
- Provision of information on quality of construction, which supports the targeting of training and technical assistance for particular correction measures.
- Provide understanding of the prevalence of non-compliances and contribute to planning for researching how and why common non-compliances are originating.

# 8.4 Guidance for monitoring activities

## Monitoring the rate, quality and cost of reconstruction

Monitoring the rate, quality and cost of reconstruction refers to overall and detailed tracking of progress and issues in reconstruction in order to inform policies and programmes and support evidence-based decision making. Housing reconstruction support cannot be fully designed from the outset or in a top-down manner. It is an iterative process, responding to the needs and actions of those rebuilding as they evolve. A responsive approach relies on timely and accurate monitoring of field progress to support evidence-based decision making.

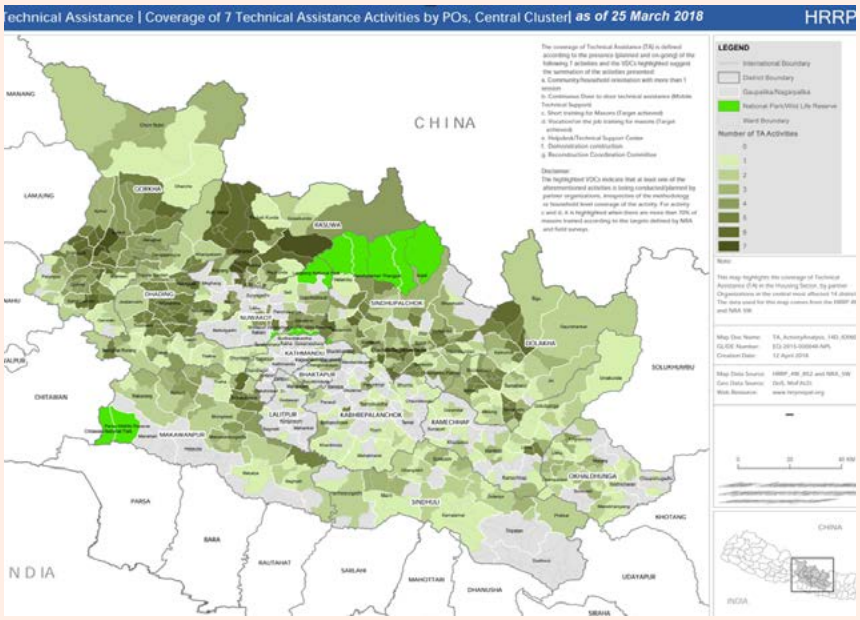
| Activities in chapters 4-7 | Monitoring the rate, quality and cost of reconstruction |
|---|---|
| **Implemented by** | • Monitoring may involve building permit or inspection databases, or may be carried out through field surveys and sampling.<br>• Data may be collected by government officials, by technical assistance partners and/or by technical experts.<br>• Large scale quantitative data sources and targeted investigative assessments may be carried out together or may be complementary.<br>• Data streams need to be consolidated centrally, by government or other designated agents. |
| **Target audience** | • Government authorities at national and district-level responsible for policies, standards, management and coordination of reconstruction<br>• Funding and implementing assistance agencies<br>• Construction industry |
| **Preparation** | • Establish Information management system including base for geospatial analysis.<br>• Develop data collection and analysis methodologies and protocols.<br>• Mobilise and/or train human resources for data collection and analysis.<br>• Define baseline costs, quality, time involved in construction for typical typologies.<br>• Define construction calendar at various locations.<br>• Define typical construction process. |
| **Objectives** | • Analyse the rate of reconstruction geographically to identify areas of early and late progress to inform policy development and targeting of assistance.<br>• Analyse patterns of reconstruction, including types and prevalence of shortcomings to be addressed through standards, training, information or other measures.<br>• Analyse technical, economic and social factors affecting reconstruction progress and quality and the potential solutions to overcome difficulties. |

## 8.4 Guidance for monitoring activities

| Activities in chapters 4-7 | Monitoring the rate, quality and cost of reconstruction |
|---|---|
| **Activities** | • Monitor overall and differential rates of reconstruction and rehabilitation at regular intervals from directly after the crisis to completion of reconstruction.<br>• Identify challenges to reconstruction progress.<br>• Monitor reconstruction typologies (construction materials, numbers of storys, and floor area of building).<br>• Identify deficiencies in rehabilitation and new construction and explore reasons for substandard works.<br>• Monitor adoption of building, service and site improvement measures.<br>• Monitor the cost of construction (per sqm cost x floor area, estimated expenditure to date, material, transport, and labour costs).<br>• Produce, share and discuss reports at regular intervals with key stakeholders. Reports and data-base information may be available to the public on a reconstruction monitoring website. |
| **Related activities** | • Monitoring cost and availability of materials and labour for reconstruction.<br>• Policy and programme development.<br>• Reconstruction progress may be linked to disbursement of financial assistance. |
| **Advantages/ disadvantages** | • Timely and continuous monitoring can track the impact of policies and assistance programmes and inform their development and revision.<br>• Identifying areas where reconstruction is advancing quickly can ensure early prioritisation for training and information.<br>• Building inspection data can provide a comprehensive quantitative basis for tracking recovery but needs to be supplemented by qualitative monitoring to understand the factors influencing construction patterns.<br>• Field monitoring of technical issues to be resolved can be informed by broader monitoring and targeted to critical locations, optimising technical expertise.<br>• Monitoring the cost of reconstruction is complex but is not required to be as extensive as monitoring of progress and quality. Sampling and qualitative methods are adequate to inform recovery analysis.<br>• Monitoring of progress can identify vulnerability and those struggling to rebuild and to highlight gaps in the coverage of assistance.<br>• Aggregated data requires consistency in methodology and quality. Common and consolidated monitoring streamlines procedures for government and for funding and implementing partners.<br>• Transparency in monitoring and reporting of progress reinforces accountability. |
| **Issues** | • Reconstruction progress is often monitored without investigation of the reasons for slow progress or poor quality. Both data are critical for addressing problems.<br>• Reviews of monitoring reports may highlight challenges or suggest solution options. Linking monitoring to decision-making mechanisms is mutually beneficial. |

## Case Study
### Monitoring technical assistance coverage in Nepal

In Nepal, the coverage of technical assistance was monitored per district. This map shows the coverage of technical assistance by partner organisations as of March 2018. The data was collected by HRRP (the Housing Recovery and Reconstruction Platform in Nepal).




*Source: HRPP.*

## 8.4 Guidance for monitoring activities

### Monitoring assistance

Monitoring assistance refers to the coverage, levels, type and quality of financial and socio-technical assistance available to crisis affected populations. Monitoring assistance accounts for inputs rather than outcomes which are better captured through the KAP or reconstruction progress monitoring. Tracking assistance can highlight gaps to be addressed through coordination and ensure optimisation and equitable distribution of resources.

| Activities in chapters 4-7 | Monitoring assistance |
|---|---|
| **Implemented by** | • Reporting of assistance may be formally required by national or local authorities, as part of project approval or financial tracking processes, accounting for funding, activities and locations. Reconstruction-specific monitoring may be established by dedicated authorities.<br>• Non-governmental organisations may report within humanitarian coordination mechanisms. |
| **Target audience** | • Government authorities at national and district-level responsible for policies, standards, management and coordination of reconstruction.<br>• Funding and implementing assistance agencies. |
| **Preparation** | • Establish Information management system including base for geospatial analysis.<br>• Develop data collection and analysis methodologies and protocols.<br>• Mobilise and/or train human resources for data collection and analysis. |
| **Objectives** | • Analyse coverage of assistance with respect to damage and reconstruction needs.<br>• Analyse levels of assistance in terms of funding and activities.<br>• Identify gaps in and concentrations of assistance to inform efforts to optimise and ensure equitable distribution.<br>• Develop coherent, consistent response harnessing assistance available. |
| **Activities** | • Monitor location, timing and activities of government assistance activities.<br>• Monitor location, timing and activities of non-government assistance activities.<br>• Monitor secured and pipeline funding of government and non-government assistance activities.<br>• Identify gaps and priorities to be targeted with assistance resources. Coverage and targeting may be addressed incrementally over the course of reconstruction as resources are committed and needs are identified.<br>• Monitoring the quality and impact of assistance should be carried out at in time to identify and adopt revisions, and not only aiming to account for completion of activities and disbursement of funds.<br>• Monitoring of assistance activities may be carried out across multiple projects or organisations, to optimise human resources, promote exchange, ensure independence or pool higher-level and multi-disciplinary expertise.<br>• Produce, share and discuss reports at regular intervals with key stakeholders. Reports and data-base information may be available to the public on a reconstruction monitoring website. |

## 8.4 Guidance for monitoring activities

| Activities in chapters 4-7 | Monitoring assistance |
|---|---|
| **Related activities** | • Monitoring rate and quality of reconstruction<br>• Policy and programme development |
| **Advantages/ disadvantages** | • Monitoring of reconstruction assistance activities may build on coordination and information management used in the emergency response, or in long-term development assistance programming.<br>• Monitoring of assistance can support coordination and cooperation by government and non-governmental stakeholders to agree common approaches and funding levels in their programmes.<br>• Local community organisations and philanthropic assistance may operate informally, outside of coordination and reporting mechanisms and may require appropriate monitoring to capture and analyse.<br>• In some contexts, formal monitoring of non-governmental assistance is onerous, or does not accommodate the flexibility required to adapt activities, locations and timing required to achieve greater coverage and optimisation.<br>• Aggregated data require consistency in methodology and quality.<br>• Transparency in monitoring and reporting of assistance reinforces accountability. |
| **Issues** | • Reporting to institutional donors may involve existing formats and intervals and focus on financial accountability.<br>• Organisations may disclose project implementation funding but not overheads, such as salaries.<br>• Reconstruction progress is often monitored without investigation of the reasons for slow progress or poor quality. Both data are critical for addressing problems.<br>• Reviews of monitoring reports may highlight challenges or also suggest solution options. Linking monitoring to decision-making mechanisms is mutually beneficial. |

## 8.4 Guidance for monitoring activities

### Monitoring construction markets: material, labour and transport

Monitoring the availability, quality and cost of key construction materials, construction labour and transport refers to the tracking of key markets which enable reconstruction. Reconstruction progress is contingent on the availability, accessibility and affordability of materials and labour, including transportation to site. Construction sector production and distribution capacity may be affected by the disaster. Increased demand may cause inflation, delays or shortages affecting reconstruction progress, cost and quality. Analysis of construction markets can highlight supply chain constraints to be addressed through policy or programme measures. Longitudinal analyses are particularly useful in recurrent disaster contexts and to understand the impact of reconstruction on the local economy.

| Activities in chapters 4-7 | Monitoring the rate, quality and cost of reconstruction |
|---|---|
| **Implemented by** | • Government and/or construction industry may have established mechanisms for monitoring material and labour costs as part of construction price monitoring or may develop mechanisms specifically for reconstruction.<br>• Data may be collected by government officials, assistance partners, construction industry, chamber of commerce or consumer representatives.<br>• Data streams need to be consolidated centrally, by government or other designated agents. |
| **Target audience** | • Government authorities at national and district-level responsible for policies, management and coordination of reconstruction<br>• Funding and implementing assistance agencies<br>• Construction industry<br>• Households and communities procuring materials, labour and transport |
| **Preparation** | • Define scope of market monitoring.<br>• Define the ecology of construction markets, (production, importation, distribution, capacity, regulation, to inform design of monitoring methodology.<br>• Establish Information management system including base for geospatial analysis.<br>• Develop data collection and analysis methodologies and protocols. Existing mechanisms may require increased frequency, increased locations and additional data fields specifically for reconstruction.<br>• Mobilise and/or train human resources for data collection and analysis. |
| **Objectives** | • Analyse the availability and cost of materials, labour and transport geographically to identify areas where market constraints are affecting reconstruction progress to inform policy and programme development.<br>• Analyse technical, economic and social factors affecting construction market functioning and the potential solutions to overcome difficulties. |

## 8.4 Guidance for monitoring activities

| Activities in chapters 4-7 | Monitoring the rate, quality and cost of reconstruction |
|---|---|
| **Activities** | • Monitor the availability and the unit cost of key construction materials at regular intervals and locations from directly after the crisis to completion of reconstruction, through monitoring suppliers and local markets.<br>• Monitor the availability and the rates of key construction labour at regular intervals and locations from directly after the crisis to completion of reconstruction.<br>• Monitor the availability and costs of transportation in relation to materials and labour, including transportation from site of importation/production to sites of sale and use.<br>• Identify deficiencies in market functioning and potential solutions.<br>• Identify the impact on reconstruction progress of market deficiencies.<br>• Produce, share and discuss reports at regular intervals with key stakeholders including construction industry representatives. Reports and data-base information may be available to the public on a reconstruction monitoring website. |
| **Related activities** | • Monitoring the rate and quality of reconstruction<br>• Material quality assurance<br>• Policy and programme development |
| **Advantages/ disadvantages** | • Understanding supply chain dynamics can inform policies to support construction markets to recover after disaster, better enable reconstruction, and to strengthen long-term local economic development.<br>• Early analysis of construction market capacities and needs can ensure timely measures to increase and improve supply for reconstruction.<br>• Geographic analysis can cross reference market data and damage/ reconstruction needs data.<br>• Data can be easily, quickly and cheaply collected and corroborated by phone, SMS or email, by producers, vendors, purchases or independent reporters.<br>• Market monitoring data can provide a comprehensive quantitative basis for tracking the economics of recovery but needs to be supplemented by qualitative monitoring to understand the factors influencing market dynamics.<br>• Market monitoring is simpler than monitoring the cost of construction and can be carried out more extensively and frequently.<br>• Salvage materials and local materials (such as stone, earth, timber, bamboo or thatching grasses) may be procured outside of market mechanisms and will need appropriate monitoring mechanisms.<br>• Labour rates monitoring should capture seasonal factors, local and migrant labour dynamics, and urban/rural patterns.<br>• Aggregated data require consistency in methodology and quality. Common and consolidated monitoring streamlines procedures for government and for funding and implementing partners.<br>• Transparency in monitoring and reporting of progress reinforces accountability. |

## 8.4 Guidance for monitoring activities

| Activities in chapters 4-7 | Monitoring the rate, quality and cost of reconstruction |
|---|---|
| **Issues** | • Unit specifications need to be consistent and appropriate according to local usage. For example, sand may be commonly purchased by standard trailer (volume) rather than by weight. Units may vary from production to distribution. The cost (and unit) at the point of purchase by the household/ mason is critical.<br>• Market monitoring focuses on availability and rates of materials rather than quality which requires specific expertise and methodologies. Basic specification data are needed to ensure consistency in market monitoring.<br>• Labour market monitoring focuses on availability and rates rather than skill and knowledge levels which require specific expertise and methodologies.<br>• Construction markets are often monitored without investigation of the reasons for shortages, delays, rising costs or poor quality. Both quantitative and qualitative data are critical for addressing problems.<br>• Reviews of monitoring reports may highlight challenges or also suggest solution options. Linking monitoring to decision-making mechanisms is mutually beneficial. |

# 8.5 Quality assurance

Quality assurance means the enforcement of standards for materials, labour, building design and construction, planning application and approval processes, industry regulation of standards, professional regulation of service providers, and commercial testing facilities. It is critical that all elements in the activities described in this guideline meet quality standards, and that where this is not yet the case, an effort is being made to work towards meeting the quality standards (for example, in training of construction workers, the goal should be that the local school meets the quality standards for construction education).

The term quality assurance comes from production industries, where it refers to those activities that have to do with the design of processes (quality assurance) so that the quality of the end product can be verified (quality control). In a technical assistance intervention there are many elements that should be subject to quality assurance. If done right, the programme contributes to institutionalising procedures for quality assurance on some of these points.

## Quality standards

Quality assurance is about ensuring sufficient quality. What sufficient quality is, can be a difficult question. For many aspects of the construction industry, standards can be agreed. These standards are either defined by a national agency, or made by the international organisation for standardisation (ISO or IEC). There are standards for anything from requirements for joints to civil engineering processes. For personnel, there are standards for educational institutions, guaranteeing a level of competence of its alumni. In post-disaster contexts standards are not always immediately available.

## Example quality assurance activities

- Individual building inspections: To check on the building quality according to the agreed standard
- Inspection/testing of construction materials
- Certifying construction sector professionals
- Setting up certification programmes for the following construction sector professionals
  - Construction workers
  - Contractors
  - Site surveyors
  - Engineers
  - Architects
- Awareness activities on quality standards with material producers and vendors
- Awareness activities with communities on quality standards (in materials and construction sector workers)

## Case Study
### Awareness activities on quality standards with school children

An element of quality assurance of construction material is to increase awareness with the general public about what good construction materials look like. In Haiti, the concrete block is one of the most used construction materials, but the quality of the blocks is often insufficient.

A simple test (dropping a block from one metre to see if it remains intact) can determine whether a block is of sufficient quality. In the photo to the right, an engineer is demonstrating this 'block test' to schoolchildren.

*Source: UN-Habitat Haiti.*

# 8.6 Evaluation, learning and accountability

## Evaluations

The information from the monitoring stored in the information management system can, if necessary, supplemented by qualitative data, be used to evaluate the effectiveness and efficiency of the programme or parts of the programme. Evaluations[3] judge the activity or programme on predetermined indicators (e.g. relevance, effectiveness, efficiency, sustainability, and impact, etc.).

The recommendations made in an evaluation should lead to changes in future activities or programmes. Evaluations are typically conducted after the intervention is completed, though larger programmes might also have mid-term evaluations.

Evaluations are particularly vulnerable to constraints in time or funding, and subjectivity in the assessment is hard to avoid. Another risk is that the evaluation focuses on the 'correct' implementation of the intervention (i.e. has the activity been executed as was planned) only, losing sight of the (secondary) outcomes or impacts. This is even more likely because the latter two are significantly harder to assess.

## Longitudinal evaluations

A special form of evaluation is the longitudinal evaluation. This type of evaluation follows an intervention for a long time, ideally a decade or more, and looks at the long-term effect of interventions. Longitudinal evaluations can facilitate analysis of what knowledge, attitudes and practices introduced through technical assistance for recovery were sustained or not sustained, by whom, why, where and how and what short and long-term changes occurred in the housing sector.

This type of evaluation provides extremely relevant information, but they can be hard to execute and find funding for.

### Case Study
### Longitudinal study of Malcondji village following the 1993 Latur earthquake in Maharashtra State, India

In 2010, Professor Ian Davis returned to the Indian village of Malcondji to see what the long-term effects had been of the reconstruction of the village after the 1993 earthquake. Among other things, he concluded that construction workers who had been trained at the time made good use of the training after reconstruction by securing occasional building work. He also concluded that the high level of participation of the villagers in the design of the houses and layout of the town at the time had resulted in high levels of satisfaction with the town almost two decades later.

*Source: Alexander, D. and Davis, I. (2015) Recovery From Disaster, Chapter 1.*

[3] The Development Assistance Committee of the Organisation for Economic Co-operation and Development (OECD-DAC) defines evaluation as: *"The systematic and objective assessment of an ongoing or completed project, programme or policy, its design, implementation and results… to determine the relevance and fulfilment of objectives, development efficiency, effectiveness, impact and sustainability. An evaluation should provide information that is credible and useful, enabling the incorporation of lessons learned into the decision-making process of both recipients and donors. Evaluation also refers to the process of determining the worth or significance of an activity, policy or programme"* (OECD-DAC, 2002).

## Accountability and learning

### Accountability

Accountability can mean different things . Practically, accountability is the means through which power is used responsibly. It is a process of taking into account the views of, and being held accountable by, different stakeholders, and primarily the people affected by authority or power. That said, for many development organisations accountability is as much to their donors as to their beneficiaries (for evaluators, it connotes the responsibility to provide accurate, fair and credible monitoring reports and performance assessments). For public sector managers and policy-makers, accountability is to taxpayers/citizens.

That means that in practice assistance agencies (and other recovery actors like media) are accountable to multiple constituencies, including the government of the place where they are working, donors, the public, their boards of directors and staff, partners, and the people they work with or represent. In a human rights-based approach accountability to the beneficiaries is the most important. At a minimum it means that information needs of the community are met, and that a complaints mechanism is in place.

### Learning

As with accountability, learning has two sides: 1) facilitating learning within the organisation (to improve programming) and 2) disseminating gained knowledge to facilitate the learning of others.

1. Internal learning: Just producing information on how interventions are performing does not ensure that that information is used to improve future projects. The 'learning' component of MEAL systems try to ensure that information collected through monitoring does get used to inform programme development. How such incorporation of information is conducted varies per organisation.
2. External learning: M&E processes often gain insights that are useful to a wider audience. A good M&E strategy also includes methods to disseminate the lessons learnt.

### Grievance redressal and complaints mechanisms

An important part of accountability is to have grievances and complaints mechanisms in place. This means that programme beneficiaries know (are actively informed) where to go if they have a complaint, and that those complaints are dealt with adequately.

A more active form of accountability to beneficiaries is to make sure their feedback is continuously sought throughout implementation. This can not only identify (potential) issues much earlier and prevent mistrust or conflict, but can also inform type of activities or the topics that are addressed in activities. Actively collecting and compiling frequently asked questions is one way to do this.

# Related initiatives/toolboxes/references

There are many places where one can find methodologies for any of the activities in this chapter (assessments, safeguards, baselines, monitoring, evaluation). The boxes below name a few. The texts are copied from the material mentioned.

## Safer homes stronger communities (book)

| | |
|---|---|
| **Name initiative** | Safer homes stronger communities |
| **Supporting organisation(s)** | Worldbank (2010) |
| **Website** | www.openknowledge.worldbank.org/handle/10986/2409 |

'Safer homes, stronger communities' (World Bank 2010) provides a concise overview of M&E (chapter 18), and information in information management (chapter 17).

## Evaluation of Humanitarian Action (EHA) Guide

| | |
|---|---|
| **Name initiative** | Safer homes stronger communities |
| **Supporting organisation(s)** | The Active Learning Network for Accountability and Performance in Humanitarian Action (ALNAP) |
| **Website** | www.alnap.org/our-topics/evaluation |

"In 2016, ALNAP released the Evaluation of Humanitarian Action (EHA) Guide, which consolidates the current knowledge about initiating, managing and completing an evaluation of humanitarian action, offering a common reference point for humanitarian evaluators."

## (E)VCA

| | |
|---|---|
| **Name initiative** | (Enhanced) Vulnerability and Capacity Assessment (EVCA) |
| **Supporting organisation(s)** | IFRC/British Red Cross |
| **Website** | www.ifrcvca.org/what-is-evca |

"Vulnerability and Capacity Assessment' is better known in the Red Cross and Red Crescent by its acronym: 'VCA.' VCA is a process developed for communities to become more resilient through the identification, assessment and analysis of the risks they face. It enables them to explore where these risks come from, which members of the community will be the worst affected, what is available at all levels to reduce the risks, and what initiatives can be undertaken to strengthen the impact of National Society programmes to raise the capacity of people at risk."

## Environmental and Social Framework

| | |
|---|---|
| **Name initiative** | Environmental and Social Framework |
| **Supporting organisation(s)** | Worldbank |
| **Website** | www.worldbank.org/en/projects-operations/environmental-and-social-framework |

The Environmental and Social Framework (ESF) enables the World Bank and borrowers to better manage environmental and social risks of projects and to improve development outcomes.

The ESF offers broad and systematic coverage of environmental and social risks. It makes important advances in areas such as transparency, non-discrimination, public participation, and accountability—including expanded roles for grievance mechanisms.

## Post-Disaster Needs Assessment

| | |
|---|---|
| **Name initiative** | Post-Disaster Needs Assessment |
| **Supporting organisation(s)** | Worldbank, EU, UN |
| **Website** | www.ec.europa.eu/fpi/what-we-do/post-disaster-needs-assessment-pdna_en |

The Post-Disaster Needs Assessment (PDNA) assists governments with assessing the full extent of a disaster's impact on the affected country and, on the basis of these findings, to produce an actionable and sustainable Recovery Strategy for mobilizing financial and technical resources. he PDNA is comprised of a 'Damage and Loss Assessment' (DALA), a 'Human Recovery Needs Assessment' (HRNA) and a 'Recovery Framework.'

## Disaster Recovery Framework

| | |
|---|---|
| **Name initiative** | Disaster Recovery Framework |
| **Supporting organisation(s)** | Worldbank, EU, UN |
| **Website** | www.gfdrr.org/en/disaster-recovery-frameworks |

In 2014, GFDRR, in partnership with the EU, UNDP, and the World Bank, launched the Guide to Developing Disaster Recovery Frameworks (or DRF Guide). What makes the DRF Guide unique is that it offers a flexible methodology that countries can adapt to their own context in order to create a national framework that will help them rebuild and recover. The DRF Guide not only helps governments create disaster-recovery frameworks to facilitate a smooth recovery process, but also aims to improve resilience for the future.

## Multi-cluster/sector Initial Rapid Needs Assessment (MIRA)

| | |
|---|---|
| **Name initiative** | MIRA |
| **Supporting organisation(s)** | OCHA |
| **Website** | www.emergency.unhcr.org/entry/198217/multicluster-sector-initial-rapid-needs-assessment-mira |

A MIRA is an inter-agency needs assessment and analysis process, from which a joint strategic plan for emergency response is developed by the humanitarian country team. Although the MIRA may be modified for various emergency contexts and can be used to respond to IDP or non-refugee emergencies, the MIRA analytical framework and approach is the most effective in a sudden onset disaster, and is conducted in the first weeks of a disaster. The MIRA process focuses on producing a situational analysis during the first three days of the onset of a disaster, followed by a MIRA report to be released within 2 weeks of the start of a disaster. A MIRA is an inter-agency needs assessment and analysis process, from which a joint strategic plan for emergency response is developed by the humanitarian country team. Although the MIRA may be modified for various emergency contexts and can be used to respond to IDP or non-refugee emergencies, the MIRA analytical framework and approach is the most effective in a sudden onset disaster, and is conducted in the first weeks of a disaster. The MIRA process focuses on producing a situational analysis during the first three days of the onset of a disaster, followed by a MIRA report to be released within 2 weeks of the start of a disaster.

## Assessing local building cultures for resilience & development

| | |
|---|---|
| **Name initiative** | Assessing local building cultures For resilience & Development |
| **Supporting organisation(s)** | CRAterre |
| **Website** | www.craterre.hypotheses.org/999<br>Example of a profile (Haiti):<br>https://drive.google.com/file/d/0B_TTG4Ds-jcQSC1kbDI2YXZDN0U/view |

This document is a guide for decision makers and project leaders on how to assess local construction practices in order to be able to increase the population's resilience. Construction practices are the result of communities adapting to local conditions of the environment and the terrain on which they have established their structures, be they physical, climatic, social, economic, and cultural conditions. Globally, there are many different construction practices, and all evolve over time. Furthermore, it is possible for different construction practices to co-exist in the same place.

## Overview of building cultures and construction principles

| | |
|---|---|
| **Name initiative** | Local building cultures for sustainable & resilient habitats |
| **Supporting organisation(s)** | CRAterre (IFRC, SC-CF) |
| **Website** | www.craterre.hypotheses.org/1774 |

This booklet is part of a set of tools now developed within the framework of a working group (led by CARE and CRAterre) within the Global Shelter Cluster to enhance the appreciation of local practices developed by communities to adapt their housing/settlements to their specific environment, including risk preparedness. It presents a series of worldwide examples of local techniques, know-how and knowledge that can be used in reducing housing vulnerability. Though, rather than being a catalogue, it has been conceived as an eye-opener for field operators. The idea is that, with these examples in mind, they will have a sharpened capacity to identify such local solutions during preliminary field inspections.

## City Resilience Profiling Tool

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|---|---|
| **Name initiative** | City Resilience Profiling Tool (CRPT) |
| **Supporting organisation(s)** | UN Habitat (CRPP) |
| **Website** | www.urbanresiliencehub.org/tools-for-action |

The CRPT provides a framework for local governments to collect the right data from their city, evaluate them and generate a resilience profile that is unique to their urban context. By outlining the general context of the city, including all relevant stakeholders and plausible shocks and stresses, and providing a framework for data collection, the CRPT allows a preliminary identification of gaps and opportunities over a series of different aspects regarding the city's structure and functionality, hereby providing a baseline for future actions.

## Disaster Resilience Scorecard for Cities

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|---|---|
| **Name initiative** | Disaster Resilience Scorecard for Cities |
| **Supporting organisation(s)** | UNISDR (IBM, AECOM) |
| **Website** | www.unisdr.org/campaign/resilientcities/home/toolkitblkitem/?id=4 |

UNISDR has updated the Disaster Resilience Scorecard for Cities. The Scorecard provides a set of assessments that allow local governments to monitor and review progress and challenges in the implementation of the Sendai Framework for Disaster Risk Reduction: 2015-2030, and assess their disaster resilience. It is structured around UNISDR's Ten Essentials for Making Cities Resilient.

## Quick Risk Estimation (QRE)

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|---|---|
| **Name initiative** | Quick Risk Estimation (QRE) |
| **Supporting organisation(s)** | UNISDR |
| **Website** | www.unisdr.org/campaign/resilientcities/home/toolkitblkitem/?id=3 |

The Quick Risk Estimation (QRE) tool has been designed for the purposes of identifying and understanding current and future risks/stress/shocks and exposure threats to both human and physical assets. The QRE Tool is not a full-scale risk assessment, rather a multi-stakeholder engagement process to establish a common understanding. Taking into account the actions or corrective measures already undertaken, the QRE will produce a dashboard-style risk assessment advising the risks and hazards to human and physical assets, impacts of identified main risks and associated perils on the specified location and/or particular asset.

## Humanitarian Accountability Partnership (HAP) Standard

| | |
|---|---|
| **Name initiative** | Humanitarian Accountability Partnership (HAP) Standard |
| **Supporting organisation(s)** | Humanitarian Accountability Partnership (HAP) |
| **Website** | www.reliefweb.int/report/world/guide-hap-standard-humanitarian-accountability-and-quality-management-0 |

The HAP Humanitarian Accountability and Quality Management Standard (2007) provides an industry standard for humanitarian accountability. It represents a broad consensus on what matters most when an agency responds to an emergency. A part of the HAP Standard is a voluntary certification scheme, which together with the Standard itself represents a breakthrough in helping humanitarian agencies be more accountable to disaster-affected populations. This practical guide provides everything needed for humanitarian agencies and practitioners who want to improve their accountability and quality systems and who are aiming for HAP certification. It will also be useful to government departments involved in disaster management, and to international bodies interested in accountability and good practice in the humanitarian sector.

## Sustainability assessment tool: QSAND

| | |
|---|---|
| **Name initiative** | QSAND |
| **Supporting organisation(s)** | BRE-global and IFRC |
| **Website** | www.qsand.org/download-qsand-and-online-training |

QSAND is a free-of-charge shelter and settlement sustainability and resilience self-assessment tool developed by BRE Global (the developers of BREEAM), on behalf of the IFRC. IFRC commissioned the development of QSAND to promote sustainable shelter and settlement activities in the aftermath of disasters. The tool draws on the standards developed by BREEAM, the world leading sustainability certification scheme for buildings, infrastructure and master planning. The tool was developed to support the drive in the humanitarian sector to consider and benchmark sustainable approaches to shelter and settlement operations after disasters. QSAND takes a wide variety of factors, which impact the disaster recovery process, into account and promotes a holistic sustainability approach to address the context. Where practical, early decisions should positively influence the sustainability of the long-term reconstruction of the disaster hit area.

## International NGO online resource material libraries

| | |
|---|---|
| **Supporting organisation(s)** | CRS, IFRC |
| **Website** | CRS online institute for capacity strengthening:<br>www.ics.crs.org<br>The IFRC resource library:<br>www.media.ifrc.org/ifrc/document-library<br>Oxfam digital repository:<br>www.oxfamilibrary.openrepository.com/oxfam<br>Care International insights:<br>www.insights.careinternational.org.uk |

*Women carrying stones for reconstruction. Women undertake unskilled, low paid, and difficult work in many contexts as they are the only opportunities open to them.*
**Source:** *Viv Cumming.*

# CHAPTER 9
# Cross-cutting issues

Gender and vulnerability are identified as cross-cutting in guidance for post-disaster needs assessments and disaster recovery frameworks.

The following chapter explores the specific gender and vulnerability issues that arise in relation to technical assistance for housing recovery and seeks to address them in strategy development at all levels.

The chapter explores how gender and vulnerability considerations may be interpreted positively across the previous chapter topics in order to ensure technical assistance policies are appropriate and interventions are actionable.

*Women may be able to participate in community meetings or may face social, cultural or practical barriers.* **Source:** *Vero Wijaya/UN-Habitat.*

# Gender

'"Gender' refers to the socio-cultural roles, norms, and values associated with being a man or a woman. These roles, norms, and values determine how women and men prepare for, react to, and recover from disasters, and they often cause unequal distribution of power, economic opportunities, and sense of agency." [8]

Disasters affect women, men, girls and boys differently, due to gender inequalities caused by socio-economic conditions and cultural practices which commonly disadvantage females. Destruction of the family home, managing domestic activities in temporary accommodation, and organising housing reconstruction or rehabilitation add significant burdens to women's roles in the household.

Women's roles in housing reconstruction are often underestimated, including directly building themselves or contracting and supervising building where they are heads of households and where their menfolk are away working as migrants. Women need access to information, resources and decision-making in order to shape their housing recovery according to their priorities. In addition to managing the rehabilitation or reconstruction of their own homes, women play vital roles sharing information, supporting each other and their communities.

Women should not be considered only as a 'vulnerable group.' Rather, women are a source of housing knowledge and skills which can inform topics from building standards to housing finance and communication strategies. Greater participation by women can make the planning and implementation of housing recovery policies and programmes more effective and deliver more resilient recovery outcomes for all.

Recovery is a period of change, with opportunities to transform unequal power relations and promote gender equality. However, attempts to promote women's empowerment may face resistance or backfire. Rigid imposition of gender-based participant quotas for training, committee membership or other measures may not be appropriate. Reform of women's property rights may be urgent and necessary to facilitate reconstruction. Both high-level political leadership and grassroots level buy-in are needed to progress gender considerations successfully in recovery policies and in practical technical assistance activities.

The challenges women face in housing recovery may be addressed, new and more progressive gender roles and relationships may emerge, and gender inequality may be reduced through integrating gender at all levels and across different programmes.

The table below looks at how gender considerations may translate into gender-specific policies and interventions in technical assistance.

| Theme | Gender-specific policies and interventions |
|---|---|
| **Key determinants** | Household and community structures, cultural and social practices |
| | Female literacy and education levels |
| | Female participation in work outside the home |
| | Female land and property rights |
| | Gender issues in access to financial assistance and financial services |
| **Institutional arrangements** | Ensure national gender mechanisms are involved in recovery institutional arrangements including ministries responsible for gender and social affairs. |
| | Establish roles for civil society women's organisations in the planning, implementation and monitoring of recovery. |
| | Promote opportunities for leadership for women at all institutional levels. |
| | Advocate with men to support gender considerations. |
| **Policies, strategies standards** | Recognise women and promote their rights in policy and legal frameworks. |
| | Recognise women as decision makers or participants in decision making. |
| | Incorporate women's knowledge and advice in housing recovery policies, building standards and technical assistance strategies. |

[8] p 3. 'Gender Equality and Women's Empowerment in Disaster Recovery. Disaster Recovery Guidance Series.'

GFDRR, The World Bank. UN Women, IRP, EU.

| Theme | Gender-specific policies and interventions |
|---|---|
| **Financial assistance** | Identify and address legal, policy, cultural and social barriers that might restrict women's access to, and use of, financial assistance.<br>Identify and address barriers to women's access to financial services.<br>Invest in financial services and products such as micro credit and savings schemes targeted at supporting women's livelihoods. |
| **Training** | Provide gender training for decision makers and technical assistance programme personnel to develop knowledge and tools to analyse and develop more inclusive recovery policies and programmes.<br>Ensure training opportunities are accessible for women, taking account of location, timing, childcare, cost and other factors.<br>Provide training tailored to meet needs identified by women for knowledge and skills required in recovery.<br>Support women to adopt leadership and decision making roles through capacity building, mentoring and other measures. |
| **Mass communication** | Identify and address women's information needs.<br>Use mass communication channels that are accessible to women.<br>Broadcast at times convenient for women. |
| **Community outreach** | Recognise women as decision makers or co-participants in decision making.<br>Recognise women's community roles as organisers and negotiators.<br>Ensure women have access to employment in community-based outreach programmes with appropriate terms and conditions.<br>Ensure the safety and security of women in community outreach teams through appropriate programming, logistical support and other measures.<br>Provide community outreach activities tailored to meet needs identified by women for knowledge and skills required in recovery.<br>Provide outreach activities tailored to the specific needs of women-headed households, elderly women, working women, women from vulnerable and other groups.<br>Support women to step into community leadership and decision-making roles including through committees for housing and community recovery. |
| **Quality assurance (MEAL)** | Differentiate data by sex and age in assessments, monitoring and evaluation.<br>Ensure there are gender targets and indicators in technical assistance activities.<br>Engage women's organisations in independent evaluation of gender outcomes.<br>Ensure assessments, monitoring and evaluations facilitate participation by women. |

**See further information:**

Gender in Disaster Recovery. Guidance Note. GFDRR World Bank, UN Women, IRP,EU.
www.reliefweb.int/report/world/disaster-recovery-guidance-series-gender-equality-and-women-s-empowerment-disaster

UN Women. Crisis response and recovery.
www.unwomen.org/en/what-we-do/humanitarian-action/emergency-response

*Women and men working in reconstruction.*
**Source:** *Vero Wijaya/UN-Habitat.*

*Woman checking the quality of mason's work on site, supervising construction of her own home.* **Source:** *Vero Wijaya/UN-Habitat.*

*Women carrying stones for reconstruction. Women undertake unskilled, low paid, and difficult work in many contexts as they are the only opportunities open to them.* **Source:** *Viv Cumming.*

*Over 55,000 women-headed households managed the reconstruction of their family homes, compliant with building standards, after the 2005 Kashmir earthquake in Pakistan. Male household members were out of the region or out of the country as migrant workers.*
**Source:** *Vero Wijaya/UN-Habitat.*

*Women clearing drains after flooding in Peru.*
**Source:** *IFRC.*

*Female member of technical assistance team training local masons and community leaders on construction standards.*
**Source:** *Michelle Marrion.*

# Vulnerable groups and inclusive recovery

The vulnerable and disadvantaged in society are disproportionately affected by disasters, and frequently find it hardest to reconstruct their livelihoods and homes after disasters, in turn becoming more vulnerable to the effects of subsequent hazard events.

Despite good intentions and the investment of significant efforts and resources, post-disaster recovery support invariably falls short of addressing the barriers faced by vulnerable groups. Among the challenges are the standardisation of policies, solutions and assistance in large-scale disasters. Improving analysis and integrating vulnerability and inclusion considerations into recovery policies and interventions may deliver improved recovery outcomes for vulnerable groups and contribute to a more equitable society.

UNISDR defines vulnerability as: *"The characteristics determined by physical, social, economic and environmental factors or processes which increase the susceptibility of an individual, a community, assets or systems to the impacts of hazards"* (UNISDR, 2017).

Vulnerability means different things to different people and in different contexts. Some definitions include exposure to, in addition to susceptibility to, harm. Vulnerability analysis in recovery contexts involves understanding long-term root causes or underlying drivers of vulnerability as well as recent disaster-induced vulnerabilities and understanding the impacts on people's' capacities to cope with and recover from disasters.

The majority of guidance on vulnerability considerations in disaster risk management is concerned with risk reduction and preparedness rather than disaster recovery contexts. Post-disaster existing vulnerabilities are exacerbated and new vulnerabilities are created such as newly landless people or communities. Conditions in these contexts are complex and decision-making is accelerated and urgent.

The extent to which recovery stakeholders and resources can help address vulnerability depends on informed identification of vulnerable groups and informed development of policies and interventions to support their housing recovery.

Wealthier countries have reduced risks, but still have vulnerable groups. Poorer and less well-governed countries are likely to have higher proportions of vulnerable people and after catastrophic disasters, by some criteria, the majority of the affected population may be categorised as vulnerable. Identifying or defining vulnerable groups is complicated when normal systems are disrupted, or when carried out by agencies unfamiliar with the pre-disaster context.

Vulnerability in recovery is multi-dimensional and includes physical determinants such as populations displaced from origin or residing in extremely inadequate shelter conditions; and social determinants such as refugee status, illegal or informal property status, ethnic or other minority groups, elderly or disabled individuals, poor households and those whose livelihoods were severely affected by the disaster (see list in key determinants below).

Some challenges may be addressed centrally through legal and institutional measures, such as the removal of barriers to property ownership, while others require measures to secure representation but also different processes of elimination of stigmas and changes to social and cultural attitudes. Vulnerability may be alleviated through material assistance, but underlying economic disadvantage is unlikely to be comprehensively redressed through recovery support and the aim is more likely to be mitigating the risk of exacerbating poverty.

The emphasis in housing recovery programmes addressing vulnerability tends to be on the provision of material assistance to targeted households, or targeted communities, often reaching very small numbers and with limited impacts.

A more comprehensive approach to vulnerability and inclusive recovery is required at all levels and across different programmes, many of which do not involve material assistance but rather optimise the potential of technical assistance to improve short and long-term recovery outcomes.

**Protection based:** A protection-based approach asserts the responsibility of national and local authorities as well as the humanitarian community to protect disaster-affected populations in accordance with international laws, agreements and organisational mandates. A protection-based approach aims to secure and strengthen the rights of vulnerable individuals and groups in recovery, including land and tenure rights, rights to information and rights to representation and protection from discrimination.

**Inclusive:** An inclusive approach recognises and accommodates diverse needs and preferences in policies and standards and facilitates choice and agency in the implementation of recovery. An inclusive approach removes the barriers that prevent participation by vulnerable individuals and groups in technical assistance activities. Inclusion asserts the policy commitment to 'leave no one behind', with implications to assure access for all to advice, to monitor groups struggling in recovery, and to work with them to devise and implement appropriate solutions according to their priorities and coping choices.

**Pro-poor:** Extreme poverty, insecure livelihoods, lack of insurance, and insufficient access to financial assistance or credit render many households and communities vulnerable and unable to replace their household goods, rehabilitate or reconstruct their homes. Pro-poor policies may be indirect --such as ensuring standards are achievable-- or

direct --such as providing financial assistance for livelihood and housing recovery including targeting supplementary assistance to low-income households. Existing social transfer mechanisms can provide infrastructure for disbursement of recovery assistance. Offsetting the cost of reconstruction for poor households, including mitigating post-disaster inflation in the construction market, may also be achieved through increasing small business capacity, skilled labour supply, subsidising materials or improving financial services through technical construction sector support with wider and longer-lasting impacts on housing affordability.

assistance to selected households or may be based on ensuring recovery policies and assistance mechanisms are improved to respond to the needs of vulnerable households and ensure recovery support systems perform better for everyone. This second and more strategic approach includes technical assistance interventions such as: vulnerability and capacity analysis in post-disaster needs assessments, the development and operation of robust grievance redressal mechanisms, legal advice for relocation, researching and advocating low-cost technologies, and facilitating access to advice for marginalised groups.

| Theme | Pro-vulnerable and inclusion-specific policies and interventions |
|---|---|
| **Key determinants** | Vulnerable groups may include any of the following or combinations of the following profiles:<br><br>**Physical determinants:**<br><br>Populations residing in highly hazardous locations, severely damaged or unsafe buildings, extremely inadequate shelter conditions and/or shelter exposed to extreme weather.<br><br>Populations residing in areas with very high levels of building destruction as well as infrastructure and service destruction. Populations residing in inaccessible areas. Populations displaced from origin or requiring resettlement.<br><br>**Socio-economic determinants:**<br><br>Status: Insecure tenure, displaced, refugees, migrants, informal, Illegal, renters<br><br>Poverty: low income levels, low savings, livelihood losses in disaster, low insurance levels<br><br>Minorities: ethnic, religious, cultural, political minorities<br><br>Low coping capacities in recovery: elderly, disabled, chronic illness, women-headed households<br><br>All referred to hereafter as 'vulnerable groups' |
| **Institutional arrangements** | Ensure that national social protection mechanisms are involved in recovery institutional arrangements including ministries responsible for poverty and social welfare and for minority, disabled, elderly and refugee populations.<br><br>Establish roles for representative members of vulnerable groups and civil society organisations representing the interests of vulnerable groups in the planning, implementation and monitoring of recovery at all levels.<br><br>Identify and address barriers to inclusion of vulnerable groups in institutional arrangements. |
| **Policies, strategies standards** | Define vulnerable groups in the context of housing recovery through vulnerability, capacity and needs assessments and continuous monitoring.<br><br>Recognise the rights of vulnerable groups in recovery policy and legal frameworks.<br><br>Develop protection-based, inclusive, and pro-poor approaches to recovery and support for vulnerable groups.<br><br>Recognise diversity in housing policies, standards and guidance, including formal and informal housing, owned and rented housing, cultural minority traditions, low-cost construction technologies and services, and the specific needs of those with limited mobility.<br><br>Facilitate assessment of vulnerability and risk to inform policies and prioritisation of assistance.<br><br>Avoid forced relocation, facilitate only voluntary resettlement.<br><br>Ensure policies and strategies are needs-based and responsive through consultation with affected communities, field testing, review and revision mechanisms. |

| Theme | Pro-vulnerable and inclusion-specific policies and interventions |
|---|---|
| **Financial assistance** | Identify and address legal, policy, social, cultural and physical barriers that might restrict access to and use of financial assistance for vulnerable individuals and groups.<br><br>Identify and address legal, policy, social, cultural and physical barriers that might restrict access to and use of financial services for vulnerable individuals and groups.<br><br>Promote social transfer mechanisms to supplement the livelihoods and housing recovery of vulnerable groups.<br><br>Devise measures to support rental households who have lost their homes or who are affected by disaster impacts on the rental market.<br><br>Invest in and promote financial services and products such as micro credit and savings schemes targeted at protecting the incomes and savings of vulnerable groups.<br><br>Invest in and promote appropriate insurance products to ensure rapid and predictable payments in the event of disasters to vulnerable groups. |
| **Training** | Provide vulnerability training for decision makers and technical assistance programme personnel to develop knowledge and tools to analyse and develop more inclusive recovery policies and programmes.<br><br>Ensure training opportunities are accessible for vulnerable groups, taking into consideration languages, literacy, participant mix, location, timing and cost.<br><br>Ensure tailored training opportunities are provided to meet needs identified by vulnerable groups for knowledge and skills required in recovery, such as literacy, numeracy and financial management.<br><br>Provide training to support livelihood development opportunities for vulnerable groups.<br><br>Support members of vulnerable groups to adopt leadership and decision making roles through capacity building, mentoring and other measures. |
| **Mass communication** | Recognise information needs of vulnerable groups.<br><br>Ensure communication materials are available in all local languages required. Use simple and appropriate terminology and consider local literacy levels.<br><br>Ensure communication is reflective of the identities, situations and aspirations of vulnerable groups.<br><br>Promote mass communication channels that provide information at no cost.<br><br>Ensure populations with low digital literacy or digital access, including elderly or low income, are not excluded from recovery discourse and information.<br><br>Support mass communication of vulnerability issues in recovery for public sensitisation. |
| **Community outreach** | Recognise the need for inclusive engagement.<br><br>Facilitate early and continuous identification of vulnerable groups and monitoring of barriers to recovery within catchment areas of community programmes.<br><br>Ensure members of vulnerable groups have access to employment in community-based outreach programmes with appropriate terms and conditions.<br><br>Ensure advice is accessible to housebound community members and those with limited mobility.<br><br>Empower vulnerable groups to co-devise and implement technical support activities appropriate to their needs and priorities.<br><br>Facilitate vulnerable group representation in community decision making.<br><br>Facilitate the mobilisation of community support for vulnerable members. |

| Theme | Pro-vulnerable and inclusion-specific policies and interventions |
|---|---|
| **Quality assurance (MEAL)** | Differentiate data to assess, monitor and evaluate the recovery needs, capacities, progress, challenges and priorities of vulnerable groups.<br><br>Ensure there are inclusion targets and indicators in technical assistance activities.<br><br>Ensure there are vulnerability targets and indicators in technical assistance activities.<br><br>Monitor economic impacts of the disaster and recovery on poor households and communities, including levels of debt and negative coping mechanisms.<br><br>Engage representatives of vulnerable groups and civil society organisations representing the interests of vulnerable groups in participatory assessments, monitoring and evaluation of technical assistance activities and in independent evaluations of inclusion and vulnerability outcomes. |

*Afghan refugee family squatting on marginal land, affected by extreme heat and by cyclones.* **Source:** *UN-Habitat.*

*Afghan children and their homes, squatting on the outskirts of the city.* **Source:** *UN-Habitat.*

*Children playing in unsafe damaged buildings, out of school after disaster and uncertain of their homes and futures. Indonesia.* **Source:** *UN-Habitat.*


*Elderly woman shows her receipt coupon for financial assistance. Elderly people may be unable to access information, services and assistance due to limited mobility, literacy or other challenges.* **Source:** *CRS.*

*Tenants in earthquake damaged historic buildings, unable to carry out repairs and ineligible for financial assistance.* **Source:** *World Bank.*

*Source:* *CRS.*

# CHAPTER 10

# The disaster management cycle: planning before disasters, institutionalisation and sustainability beyond recovery

The disaster management cycle in this context refers to:

- Policies established and actions taken to reduce disaster risks, and to prepare for response and recovery after disasters.
- Policies and actions after disasters to institutionalise measures developed during recovery for continued application, to sustain risk reduction, and prepare for future disasters.

## Why does it matter?

Progress on disaster risk management policies and actions before disasters happen can reduce vulnerabilities and reduce the impacts of disasters. Investment in reducing risks can reduce disaster-induced deaths, injuries, damage to buildings, loss of assets, interruption of services, displacement, requirements for temporary shelter, and for housing repair and reconstruction.

Progress on planning for post-disaster recovery management before disasters happen can accelerate and improve recovery outcomes after disasters. Advance planning can designate institutional arrangements to manage recovery, establish agreements with key partners and develop capacity in the form of personnel, information and financial management systems.

Advance planning can strengthen the availability and quality of data, the appropriateness and effectiveness of building codes, training curricula, and information materials, all of which may contribute to reducing risks and equipping technical assistance stakeholders supporting housing recovery after disaster.

Where there has been no planning for recovery, valuable time is usually lost in deciding on institutional arrangements, in establishing coordination and implementation mechanisms and in critical decision making.

Where institutional arrangements and plans are in place for recovery before disasters, governments can more successfully secure funding for recovery. In the case of some state insurance products, pre- disaster planning for recovery is a condition of insurance coverage.

Establishing all systems for recovery after a disaster and at the same time as dealing with a humanitarian crisis can be difficult, expensive and affected by considerable media and political pressure.

Establishing systems only for recovery and dismantling them after a short period or failing to transfer capacity to durable authorities, results in a loss of institutional memory, expertise and data. Planning for institutionalisation on the other hand may contribute to continuing progress on disaster risk management including systems and capacities in place to manage future disaster recovery.

*All family members experience disaster risks and can gain knowledge, skills and confidence for their future safety.* **Source:** *CRS.*

*DRM improvements should be simpler and affordable for local households and builders.* **Source:** *Kubilay Hicyilmaz/ GOAL.*

## Opportunities

Ideally, disaster risk management and planning for recovery receive due attention before disasters happen. In reality, there may be limited political attention, social demand or financial resources prioritised for disaster management, particularly where disasters are infrequent. After a disaster conditions are difficult, but there are new opportunities in terms of political attention, social demand and resources available and in terms of the accelerated pace of change.

Over the last two decades, international agreements including Hyogo 1995 and Sendai 2015 have formalised disaster risk management policies. International bodies including UNISDR and GFDRR have strengthened the development and sharing of knowledge and the availability of assistance for governments, assistance agencies and other stakeholders to manage disaster risks including building institutional capacity and planning for disaster recovery.

Recent growth in insurance products for governments that are conditional on disaster prevention and disaster recovery plans being in place provides incentives for states to invest in disaster management systems including information and financial management systems and opportunities through regional bodies to transfer learning.

The experience of recurring small disasters or of a catastrophic disaster provide officials, assistance actors and communities opportunities to learn about risks, vulnerabilities, how their systems are functioning or not, technical solutions, perceptions, and capacities. The range of insights gained through real disaster experience may be better captured and acted upon if the learning is captured through documentation, maintaining systems and retaining personnel, communicating learning to others, and through institutionalisation.


*Red Cross Network of volunteers and personnel trained and operational in DRM.* **Source:** *IFRC.*

## Challenges

It is difficult to get political or financial support for disaster risk management in pre-disaster times when there are many competing priorities, including economic challenges, security concerns or political instability. Where disasters are meteorological and frequently recurring or recent, awareness may be higher, but investment in risk management may still be challenging.

Disaster risk management initiatives may be tokenistic rather than strategically achieving fundamental change. Where dedicated disaster risk management institutions exist they may have weak capacity, low levels of resources, and low impacts on wider policies and practices within authorities, the construction sector, or among the public.

While many stakeholders refer to the importance of disaster risk management cycles and synergy between activities, in practice there are significant gaps between disaster response and disaster recovery, as well as between disaster recovery and disaster risk reduction. Actors involved in one phase or set of activities are frequently unaware of actors and activities in other phases. As a result, recovery fails to build upon pre-disaster risk reduction measures, and recovery fails to lay foundations for continuing risk reduction. The segregation of actors and activities by phase is reinforced by phase specific coordination and funding mechanisms.

Disaster-event-specific recovery authorities and systems to support recovery tend not to be mandated to address long-term institutional sustainability of disaster risk management. Exit strategies, transition and transfer strategies tend to be

considered only at late stages in recovery. Earlier consideration of sustainability, institutionalisation, or transferring knowledge could be more effective.

Systems for public awareness, mobilisation of communities for training and capacity building, and for quality assurance and enforcement of standards, which operate to support recovery, are commonly short-term and discontinued after completion of post-disaster reconstruction. Maintaining adherence to standards is challenging when the incentives of financial assistance are finished, enforcement mechanisms are no longer in place,and compliance is only on a voluntary basis, the memory of disaster losses recedes and risk reduction must compete with other priorities.

*Settlement drainage and infrastructure works mitigate flooding.* **Source:** *UN-Habitat.*

# Recommendations

These recommendations concern what can be done related to technical assistance in pre-disaster and post-recovery phases.

## Pre disaster:

Carry out training for Post Disaster Needs Assessments and for Disaster Recovery Frameworks with concerned stakeholders.

Develop disaster recovery framework including for housing and for technical assistance for housing.

### Strengthen government:

- Strengthen government disaster risk management institutional arrangements, policies and programmes, with dedicated capacity and with disaster management informed policies and programmes among all concerned national and local authorities.
- Ensure planning and building codes are risk-informed and cover all segments of the built environment. Ensure risk analysis informing codes is regularly updated.
- Ensure housing sector professionals are risk-informed, through third level curricula and continued professional development on planning and building codes, hazard resistant construction and disaster risk management.

### Strengthen links between stages in the disaster cycle:

- Strengthen a continuum approach to disaster risk management by strengthening coordination mechanisms for housing recovery and links to humanitarian shelter and long-term risk reduction:
- Establish coordination mechanisms for housing recovery that mirror and liaise with coordination mechanisms for the shelter response including the global shelter cluster at international level, and at national and local level where appropriate.
- Establish coordination mechanisms for housing and settlement recovery that liaise with housing and settlement development and disaster risk management initiatives at international, national and local levels.
- Establishing coordination mechanisms for housing recovery should include mobilising both financial assistance stakeholders and technical assistance stakeholders along with regulatory authorities and a broad range of housing sector development stakeholders with expertise in housing construction, housing finance, land and tenure issues, construction skills, urban development, infrastructure and settlements and regulatory systems.

### Strengthen the knowledge base:

- Strengthen housing related data and knowledge management, including population and building census, mapping, housing sector profiling of physical, social, economic and institutional factors, regulatory issues, production capacity,

key stakeholder, and key risk issues. Improved data and analysis can inform housing policies and programmes before disaster, and inform preparedness for shelter response and planning for housing recovery after disaster.

- Invest in assessment of risks including scientific tools for analysis and participatory tools for community diagnoses. Ensure risks are communicated to concerned populations and authorities.
- Invest in monitoring knowledge of risk, attitudes to risk and associated practices in relation to managing risk, before disasters, during recovery and after recovery. Invest in monitoring levels of compliance with planning and building regulations before disasters, during recovery and after recovery.
- Analysis of risk knowledge, attitudes and practices may inform disaster risk management initiatives before a disaster. Analysis may reveal the impact of the disaster and provide a baseline from which to measure changes in knowledge, attitudes and practices achieved through technical assistance activities during recovery.

*Strengthening roofs in Caribbean to avoid recurring damage in hurricanes.* **Source:** *CRS.*

### Strengthen communities:

- Support all communities to understand their risks and to plan and implement measures to reduce risks and prepare for disasters. Areas and communities at highest risk should be prioritised. Community risk management measures might include slope stabilisation, watershed management, drainage maintenance, evacuation planning and drills, and contingency infrastructure.
- Strengthen community-based organisations, volunteer networks, professional associations, youth organisations, health service providers and other groups to participate in disaster management planning and implementation.
- Support construction sector businesses to plan and implement measures to reduce risks and prepare for disasters, including participating in insurance, and planning for business continuity.

*Woman surveys her home after earthquake damage.* **Source:** *Robbie Ryan/GOAL.*

## After disaster/during recovery/after recovery, during recovery for after recovery:

Institutionalise revised building codes, technical guidance, training curricula and information materials, including formal validation where appropriate or continued use where appropriate.

### Promote learning during recovery to inform disaster risk management in future:

- Promote whole response learning: across sectors and across phases, at central and at community level, by authorities, assistance actors and disaster-affected populations. Whole response learning can facilitate analysis of the timeline of recovery, relationships between actors, and relationships between decisions and actions taken at different stages of the disaster management cycle and recovery outcomes.
- Promote longitudinal evaluations: ensure monitoring and evaluation of recovery continues for a sustained period beyond reconstruction of buildings ideally for a decade or more. Longitudinal evaluations can facilitate analysis of what knowledge, attitudes and practices introduced through technical assistance for recovery were sustained or not sustained, by whom, why, where and how and what short and long-term changes occurred in the housing sector.
- Facilitate a wide range of local stakeholders in housing recovery to have structured opportunities to reflect on their experience, and to document, question, discuss and transfer their learning. Experienced personnel represent as valuable a repository of knowledge as many policy and best practice documents, but their knowledge is often not sufficiently valued or accessible. Peer-to-peer learning and exchanges provide continued opportunities for reflection and learning for those with recovery experience as well as learning opportunities for those newly involved in recovery situations.

### Plan to maintain data and continue to use data

- Plan from the outset to ensure data produced during recovery is captured, maintained and accessible in the longer term. Anticipate requirements for long-term access or continued operation in information management choices for recovery including the type of data produced or collected, the methodologies and formats used, who is involved in collection, processing and analysis, mechanisms for validation, access and dissemination.
- Establish open source data platforms early after the disaster to make key recovery data available throughout recovery, to strengthen accountability and transparency, to inform public discourse on recovery and to familiarise various audiences with recovery data, sources and locations.
- Establish platforms to facilitate sharing of academic research and grey literature (assessments, evaluations, project information and data bases), to inform policy and programme decisions and to inform public discourse. Research platforms may cover pre-disaster to post-recovery topics as well as context related data.
- Establish networks of personnel with experience in disaster recovery to be deployed in future disaster recovery efforts and to participate in peer exchanges and community exchanges as a means to transfer and continue to use recovery knowledge.

*Village damaged by flooding in 2007, 2010, 2011. Mitigation works require regional planning for watershed management.* ***Source:*** *UN-Habitat.*

### Sustain awareness activities:

- Plan for awareness activities to be sustained beyond the time frame of housing reconstruction. Identify institutional or other stakeholder responsibility for continued activities. Identify resources for continued activities.
- Ensure specialised technical organisations involved in recovery build local capacity to replicate technical assistance activities over the longer term, through partnership implementation during recovery, training programmes, and equipping local actors with appropriate resources and materials. Promote community-led initiatives at all stages of recovery to foster local leadership and ownership and sustainable models of awareness activities.
- Engage young people and education stakeholders to institutionalise learning from recovery and disaster risk management and to safeguard transfer to the next generation.

# Links

Hyogo Framework for action
www.unisdr.org/we/coordinate/hfa

Sendai framework for disaster risk reduction
www.unisdr.org/we/coordinate/sendai-framework

GPDRR
www.unisdr.org/we/coordinate/global-platform

GNDRR
www.gndr.org

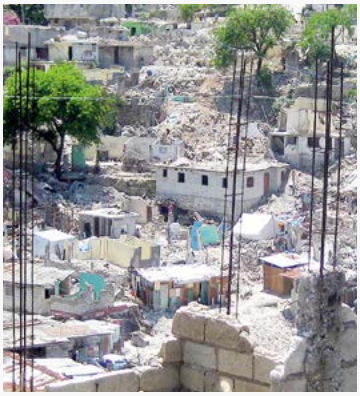
Understanding Risk
www.understandrisk.org

Disaster Recovery Framework
www.gfdrr.org/sites/default/files/publication/DRF-Guide.pdf

Global shelter cluster
www.sheltercluster.org/global

*Source:* IFRC.

# CHAPTER 11
# Financing technical assistance for housing recovery



*Source: Mary Faherty/GOAL.*

Financing technical assistance describes the mobilisation and allocation of resources for the planning and implementation of technical assistance activities as described in the previous chapters of these guidelines.

Post-disaster needs assessments commonly include aspirational plans and budgets for recovery. Disaster recovery frameworks, on the other hand, are intended to be based on actual resources available or likely to be available, and therefore trigger processes of defining institutional arrangements and time frames and describing stakeholder roles and responsibilities, targets and activities.

Housing recovery frameworks should include financial assistance and technical assistance frameworks, further detailing plans and associated budgets. This chapter looks at issues involved in budgeting for technical assistance or, in other words, financing technical assistance.

The following technical assistance activities require substantial financial investments:

- **Regulatory:** detailed damage assessment of individual buildings, approval of plans for reconstruction and rehabilitation of buildings, site inspection including stage inspection of rehabilitated and reconstructed buildings. Damage inspection requires very high staffing level over a short period, subsequent inspections and approvals require staffing over a sustained period.

- **Coordination and institutional arrangements:** coordination with concerned authorities and partner organisations, as well as liaison with sector stakeholders/ local stakeholders. Coordination is required at central, district, municipal and local levels. Coordination may be managed by existing bodies or may need dedicated capacity. Coordination may also encompass identification, allocation and implementation of research and development roles and activities for the wider use of all stakeholders.

- **Community-based outreach, engagement and mobilisation:** fixed location centres, in-community teams and mobile advisory services implementing a range of activities at community level and at household level. The level of support can vary widely according to the level of resources available. Community-based activities require high staffing levels, many recruited locally.

- **Mass communication:** mass media communication campaigns to disseminate housing recovery policies, programmes, standards and guidance through web platforms, commercial broadcasting, large-scale printing, and other channels. Developing content, disseminating information and operating two-way communication systems requires skilled professionals, market research and monitoring and requires sustaining over the duration of recovery.

- **Training:** vocational and professional training of construction workers, including practical training in order to meet labour supply needs for reconstruction, requires funding that can be estimated on a per-participant basis and should start at large scale before continuing smaller. Training requirements for officials, professionals, businesses, team members and media depend on the capacity deficits identified. Inadequate training and human resources may risk implementation of all technical assistance activities and of reconstruction.

Regulatory, coordination, community outreach, mass communication and training activities require logistics, systems development, capacity building, management, and information systems. Investment in systems optimises the large investments by government and numerous agencies in personnel, logistics and activities.

The cost of technical assistance depends on many variables and factors, as described in previous chapters in these guidelines, and in particular **Chapter 1: Determining factors for housing recovery and technical assistance for housing recovery**. In terms of budget lines, most technical assistance expenditure can be described in three broad categories:

- **Logistics:** Capital costs: premises (rehabilitation, construction, rent, upgrading, services and furniture), equipment (computers, communications and information technologies, machinery, and vehicles). Operating costs for the above (utilities, transport, fuel, internet access, etc.).

- **Personnel:** Permanent and temporary government staff, assistance organisation staff, and consultants and service providers: advisory services (e.g. risk assessments, communications strategies), contracted services (e.g. data management).

- **Activities:** Research and development, curricula, training, demonstrations, model buildings, events, and all implementation costs. Development of content for mass communication products (e.g. printed materials). Dissemination of mass communication products (e.g. printing, distribution, airtime, etc.).

# Why does it matter?

### Build capacity and facilitate informed decisions

Disasters commonly reveal severe inadequacies in pre-disaster systems mandated to ensure housing is compliant with planning and building regulations. Those systems are likely to have been further weakened by losses of personnel, data and damage to premises in the disaster. Systems are also likely to be under strain as decisions to be taken for recovery and the volume of construction requires increased regulatory capacity and corresponding budgets. Along with regulatory capacity, production capacity including financial services, construction materials and labour needs to be increased to meet the demands of reconstruction.

If investment is not made in systems to plan and implement activities such as damage assessments, risk assessments, the expansion of the skilled labour force, timely and appropriate reviews and development of building codes and associated public awareness campaigns, there are risks that reconstruction will be delayed, cost more, and households and construction stakeholders will be unable to make informed decisions.

Early investment in the development of housing recovery policies and standards and in the establishment of systems to coordinate and manage recovery, including in compliance with standards, accountability and financial transparency, can generate greater confidence and trust among stakeholders, leverage greater allocation of resources by institutional donors, and increased investment by housing sector businesses and affected populations themselves.

### Safeguard and optimise financial investment in recovery

Housing reconstruction and rehabilitation commonly represents the largest volume of construction activity and the largest sectoral budget, involving both public (government and assistance) and private funding. However even the public funding

provided directly for housing construction often does not have commensurate investment in technical assistance measures required to safeguard that investment. In other sectors, such as infrastructure or school construction, mechanisms for quality assurance are more likely to be budgeted as integral to safeguard compliance. Considering housing investment comprises budgets several times larger, associated risk is also several times larger.

Policies for housing reconstruction, repair and temporary shelter have shifted significantly over the last decade to adopt cash assistance as the dominant approach. Cash assistance represents marked progress over direct provision of housing in many regards. But cash assistance alone rarely constitutes an adequate interpretation of an 'enabling strategy', without also enabling households through access to information, enabling masons through training, enabling markets through improving production, or enabling governments through better codes and information systems. Technical assistance can guide the use of cash assistance and private resources.

The level of resources affects the coverage and quality of technical assistance. For instance, inadequate resources may result in areas without assistance or training or practical exercises. The timing of technical assistance funding affects whether guidance is developed or accessible in time to inform decisions or not. Whether funding for technical assistance is channelled through government systems or through non-governmental agencies affects the authority and institutionalisation of technical guidance, curricula and data management. Funding dynamics can drive coherence or incoherence, consistency or inconsistency, sustainability or unsustainability.

### Leverage accountability and sustainability

Effective allocation and management of resources for technical assistance can ensure key recovery objectives are met, ranging from developing affordable, culturally appropriate standards to ensuring equitable access to information; from promoting government transparency to supporting community empowerment. Funding can leverage adherence to policies, by governments or assistance agencies, and incentivise cooperation between stakeholders.

Disasters generate political and social momentum for change to address vulnerabilities in construction and to 'build back better.' Public demand for change must be matched with resources to facilitate and enact the necessary improvements. If resources are not forthcoming, the window of opportunity for change is likely to close and stakeholders are likely to lose public confidence.

Housing is a complex sector in which to achieve compliance with standards or to achieve change and improvements, particularly in privately developed housing. Improving private housing construction needs approaches that cannot be achieved only through enforcement mechanisms. Improvements require systemic changes and investments by a wide range of stakeholders.

## Opportunities

Technical assistance is focused on outcomes including compliance with standards, adoption of improvement measures, skills attained, and systems having been put in place. Which outcomes to prioritise and how to achieve those outcomes can involve different inputs or different paths, depending on the resources available and the context.

- **Flexibility:** Unlike funding the construction of a hospital, funding technical assistance does not involve a single budget which must be fully mobilised in

order for a single project to happen. Instead, technical assistance is inherently flexible. The scope of activities can vary widely according to the resources available, and vice versa. Technical assistance involves networks of different actors and activities with multiple options for implementation. The webbed nature of technical assistance brings flexibility, but also poses challenges for coordination and optimisation of resources and activities.

- **Multiple sources:** Resources for technical assistance may be mobilised from a range of sources or funding streams. Not being reliant on one source brings advantages, but accessing different sources requires adherence to various timings, objectives and conditions and poses challenges to predict ahead and coordinate overall funding. Different technical assistance activities can meet the terms of emergency, reconstruction or development funding, funding earmarked for vulnerable groups or for institutional strengthening. Difficulties arise when trying to use financing instruments for ineligible activities, or when funding conditions override other criteria in planning and implementing technical assistance.

- **Incremental:** Technical assistance activities can be planned and implemented incrementally. Initiatives can start even in highly uncertain situations. If stakeholders collaborate effectively, the capacities available at any given time can be prioritised and optimised and plans made to mobilise and deploy further resources as they become available. This requires mechanisms to account for the resources stakeholders mobilise and mechanisms to discuss the allocation of resources which become available. Such mechanisms can promote collective accountability, setting targets and measuring progress as well as informing incremental planning.

- **Inexpensive:** Technical assistance constitutes a very small budget in proportional terms, compared to the very large resources invested in reconstruction by households themselves, governments and assistance agencies. The budgets required for comprehensive technical assistance programmes across all of the disaster-affected area are not as large as the budgets many assistance organisations spend on emergency shelter in only selected communities. Seed funding in technical assistance can help optimise existing capacities (government, assistance agencies) and mobilise other capacities (construction sector stakeholders).

- **Strategic:** A disaster may destroy or damage a significant proportion of the housing stock in an area or even in a country (e.g. the 2015 earthquake destroyed 25 percent of all housing in Nepal.) Repair and reconstruction involves an increased rate and high volume of construction. There is an unprecedented opportunity to improve a large proportion of the housing stock and to inculcate changes in the systems of production and regulation. Investments in improving building codes, inspection systems, construction materials and skills in time for reconstruction can deliver large-scale reductions in housing risks and improvements in housing quality.

- **Continuing returns:** Investment in technical assistance to strengthen housing regulatory and production systems for recovery are investments that can also deliver longer-term and continuing outcomes. Standards developed for reconstruction will be valid later, skills developed for reconstruction will be utilised later, quality assurance and inspection mechanisms may be piloted in recovery and institutionalised later. Measuring the cost-benefit of the investment should take account of the results over longer periods.

- **Leverage:** Investment in robust systems to communicate and inspect standards, to manage and account for funding and to coordinate capacity can ensure technical assistance is planned and implemented more efficiently. The early establishment of such systems also generates confidence among construction businesses, institutional donors, and other partners to mobilise and allocate

more funding to housing reconstruction and to concerned authorities.

- **Never too late:** Many of the points above argue that early investment in technical assistance is necessary to guide recovery decisions in time. The implication is that funding is required soon after the disaster. However, housing recovery, particularly after large disasters, takes several years and many new issues are likely to emerge which will require policy and programme responses. Personnel and resources are needed to address issues over the course of recovery. Experience from many disaster situations also demonstrates that while early progress on technical assistance is ideal, it is also effective to invest at later stages (e.g. developing guidance on building improvements, consolidating training curricula, and institutionalising information management systems).

# Challenges

## Not supporting housing enough:

Although housing sector losses commonly represent the largest proportion of building losses in a disaster, governments, institutional donors and humanitarian agencies are often reluctant to engage in housing recovery. Investment is frequently limited to shelter assistance and to the reconstruction of community facilities such as schools, rather than private housing repair and reconstruction.

The reluctance to support housing recovery includes concerns about apparent programmatic and reputational risks including the informal status of land and property, agencies' needs for formal contracts (including to retract funding in the event of problems), challenges to ensure households meet selection criteria, and apprehensions that organisations who provide assistance assume liability for the safety of repaired or reconstructed houses.

Apart from the concerns above, many funding agencies do not engage in supporting housing because it appears to be too large and complex and they are not sure if or how they can make a difference.

Investment in shelter and housing recovery is focused on rehousing people quickly and safely. The emphasis is on construction or replacement of assets. In this regard financial and material assistance and direct construction are prioritised and considered essential. Investment in technical assistance is considered unimportant or optional, in part due to poor understanding of the scope, aim or potential, by authorities, by media, by affected populations and by assistance stakeholders.

## Poor understanding of the scope of technical assistance:

For governments, donors and the public who support disaster appeals for houses, shelters, shelter materials and even cash assistance are all perceived as more visible and tangible than technical assistance.

'Owner driven' housing recovery may result in reconstruction months or years later. Technical assistance contributes to, but does not fully control, what people build, resulting in a wide range of types, qualities and sizes. The factors in timing and variation in built outputs are not readily understood by people who are unfamiliar with disasters and are often cited as reasons not to support housing recovery in general and technical assistance in particular.

The description of technical assistance in post-disaster needs assessments and recovery frameworks is often limited to information products, training masons and community meetings. The narrow scope is mirrored by small budgets, insufficient to address the breadth of institutional development required or effective mass communication strategies, among other challenges. Funding is frequently difficult

to mobilise even for key components such as building code development, materials for practical training or model houses.

One of the major reasons for poor levels of funding for technical assistance is weak planning and communication of technical assistance strategies. Resources are not allocated to technical assistance, when those who manage housing recovery budgets are unaware of why, what or how to fund technical assistance. Invariably, technical assistance activities are not described or costed in housing recovery strategies. Targets are not set, and mechanisms are not established to mobilise, allocate and account for technical assistance programmes and budgets.

## Too complicated to measure?

Government, institutional donor and humanitarian agency funding for recovery is allocated to activities on the basis of expected outputs, evidence of which are subject to reporting, monitoring and evaluation. Funding is therefore closely linked to outputs that can be easily measured, counted or verified within the project timeframe. Many components of technical assistance do not meet these criteria as the outcome may be expected beyond the time frame of the funding. Furthermore, activities are undertaken collaboratively or comprise parts of systems, making it difficult to attribute results to individual inputs.

Appropriate indicators and mechanisms are needed to monitor the efficiency and effectiveness of technical assistance activities and to evaluate impacts, not only to secure and account for funding, but also to inform continuing and future programming.

Along with more conventional outcomes such as rates of compliance with building codes, interim tracking is needed for skills attained, awareness raised among various constituencies, improvements in material quality, adoption of sustainable building services and sustainability of institutional mechanisms. Better monitoring is needed to understand change dynamics, replication effects and value for money. Measuring progress needs to be appropriate for continuous processes, using sliding or incremental scales rather than only counting finished outputs.

## Cost-benefit argument

Disaster risk management experts strongly advocate the cost-benefit of investing in mitigation rather than in response, referencing significant returns on the investment (UNISDR 2012). Stakeholders in housing and technical assistance have not built similar evidence or arguments calculating the return on investments in building codes, curricula, communication or information management systems. Returns could be calculated on the basis of accelerating recovery, or the cost of time saved, for example, as well as calculated on the basis of losses averted in the event of future disasters.

Cost-benefits may be easiest to calculate where investments made after a major disaster have established systems that functioned to support recovery in subsequent disasters, which is particularly likely in the event of recurrent hurricanes and flooding.

Other returns on investment in technical assistance may require different calculation. These alternative calculations may include the extent to which digitising government administrative systems results in operating efficiencies and whether investments in communications strategies, grievance redressal systems and financial transparency yield results in government accountability and political stability.

## Uneven levels of resources

Technical assistance activities are undertaken by many and diverse stakeholders including government recovery authorities, UN agencies, local NGOs and university researchers, often working in discrete projects and usually discrete areas. The result is a patchwork of different levels of resources and activities distributed unevenly across the disaster-affected area. Project areas are often as likely to be selected on the ad hoc basis of agencies' previous presence as on the basis of need.

When needs are great, donors and implementing organisations commonly retreat and concentrate resources into small areas to ensure they can deliver visible results under controlled conditions, whether or not such levels of assistance are replicable by other agencies or across all communities. Some justify the high levels of investment on the basis that demonstrating good results will leverage additional investment including from their own agencies, or that high-cost pilot activities test and develop outputs for wider use by others, but such outcomes are rarely evaluated.

The projectised distribution of funding suits organisations who can define their own objectives, activities, areas and budgets without having to wait for, or work towards, consensus on cost levels or without having to commit to collective responsibility for coverage. Projectised or patchwork funding does not suit governments or affected populations who are concerned with equitable levels of resources and consistent levels of activities and the consequences both gaps and high concentrations of funding.

A programmatic approach to technical assistance, taking account of all resources and actors available, is likely to define a more calibrated geographic distribution of funding, with greater assistance being provided in areas of heavy damage or higher vulnerability. However, such prioritisation needs to be made transparently and based on agreed criteria.

Likewise allocation of funding to prioritised activities and actors needs to be made transparently and on agreed activities.

## Inefficient use of resources

Planning technical assistance strategies requires consideration of the funding and implementing capacities available as well as critical determining factors which will affect cost efficiency. In geographically large affected areas with dispersed populations and poor access transport costs can be very high, requiring trade-offs between mobile and fixed location support, and between mass-media communication and community-based outreach.

A balance must be achieved between cost and time, between the sustainability of funding existing or establishing new authorities, and between strengthening government or promoting non-governmental agencies. At the operational level between constructing dedicated resource centres and renting premises, between short and long-term efficiencies over the course of multi-year programmes.

Funding through non-governmental organisations can provide advantages in speed and flexibility for some activities, including community-based engagement but may not be the appropriate strategy, level or stakeholder to advance other activities such as the development of standards, unless there are agreements with concerned government authorities. Likewise, the dissemination of policy information may be far more expensive carried out primarily through community meetings, rather than using mass communication campaigns.

Cash assistance supporting owner-driven shelter, housing repair and reconstruction

has largely replaced the direct construction of housing by governments and humanitarian agencies, principally on the basis of efficiency. Direct construction is funding and management intensive and therefore on a per unit basis delivers a fraction of the number of houses/shelters in comparison to programmes based on cash and technical support. Cash and technical support programmes can also be streamlined to deliver greater coverage within the same resource levels (e.g. using a single cash transfer mechanism avoids the costs for multiple agencies of establishing multiple duplicate mechanisms).

Inappropriate and inefficient allocation and use of resources results, not only in high-cost assistance for some households and communities, but also in gaps in assistance for others, and understandable frustration on the part of affected populations.

## Funding institutions and institutional change

The ability of existing government authorities to deliver on their mandated responsibilities depends on several factors including their pre-disaster capacities, the impact of the disaster and the increased scale and scope of their responsibilities in recovery. Government resource needs should be assumed and planned for after major disaster, including through recovery framework planning.

Different funding mechanisms may be needed for the rehabilitation of government premises, increasing and upskilling staff, and expanding information management systems and advisory capacity to develop policies, standards and programmes to address recovery needs apart from addressing longer-term institutional development needs.

Governments face a number of challenges to mobilise and utilise funding for technical assistance. Concerned authorities may not have political support or access to government budgets. Governments may not be trusted by institutional donors or the public to manage funds effectively or with accountability, limiting their ability to raise funds from external or public sources directly.

Funds raised by humanitarian agencies, which may constitute very large resources, may be restricted from transfer to governments. Humanitarian mandates to support the most vulnerable may be narrowly interpreted to allow only for direct assistance to targeted households rather than strengthening systems to better meet the needs of a larger number of the most vulnerable.

Government authorities may not have adequate financial management or administrative mechanisms to recruit personnel, disburse funds or account for funds as required. All of these challenges can be anticipated and overcome, through political will on the part of governments and support by assistance stakeholders.

## Appropriate mechanisms to resource technical assistance

The absence of predictable institutional mechanisms to support the coordination of housing recovery programming in general and technical assistance in particular is reflected in the poor development of mechanisms to fund technical assistance. Mechanisms are needed to mobilise, allocate, optimise, utilise and account for funding and other resources.

Improving planning and coordination of technical assistance, including descriptions of activities and associated budgets, should contribute to improving funding mechanisms.

There are extensive untapped human and financial resources, which could contribute significantly to technical assistance, within the disaster-affected areas

or countries, regionally and internationally. These include, but are not limited to, construction sector stakeholders, local professionals, academia, businesses, training providers, financial service providers and media.

Appropriate mechanisms need to be developed to harness these resources. Examples might include mechanisms to transfer government personnel from other provinces, or neighbouring countries with recent recovery experience as well as financial service providers including remittance, loan and insurance providers to systematically promote linkages to technical guidance services.

Mechanisms are also required to broaden the scope of institutional funding allocation including to local community-based organisations, construction sector businesses, researchers and other stakeholders who operate outside of current formal recovery funding systems.

# Recommendations

## Pre disaster

Review and revise humanitarian and reconstruction funding guidelines and mechanisms to facilitate funding a wider range of technical assistance activities and stakeholders described in this document, many of which currently lie outside of institutional funding criteria.

Explore or develop funding options for stakeholders outside of government and assistance actors, such as local community organisations, construction sector businesses, media and academia to engage in technical assistance.

Explore options to fund technical assistance for housing recovery supply chains (finance, materials and labour) through business development finance and insurance.

Develop pooled funding mechanisms for technical assistance including eligibility guidelines for activities and for participating agencies, preclearance for agencies, defining administrating lead agencies and mobilising seed funding.

Develop post-disaster needs assessment and disaster recovery framework tools to encompass assessment for and planning of technical assistance for housing recovery, including budgeting for technical assistance strategies.

Liaise with cash assistance advocates and providers to increase their awareness of the scope of technical assistance and to promote closer development of joint financial and technical assistance policies, funding and implementation mechanisms.

Personnel responsible for housing recovery within assistance organisations (institutional donors, UN, NGOs) should promote increased awareness of housing recovery approaches and the role and scope of technical assistance within their own organisations, including with policy makers, emergency teams and communications personnel.

Organisations involved in technical assistance activities should collectively promote increased awareness of the role, scope and cost of technical assistance activities with institutional donors, humanitarian shelter agencies and development agencies.

## After disaster

### Ensure technical assistance is accounted for

Ensure technical assistance for housing recovery is accounted for in post-disaster needs assessments and disaster recovery frameworks.

Ensure planning for housing recovery establishes realistic timeframes and schedules for phased activities over the duration to guide budget estimation.

Ensure investment in financial assistance for housing recovery is supported by associated investment in technical assistance for housing recovery.

### Establish institutional arrangements

Establish coordination of housing recovery stakeholders, either by government or in parallel with and in support of government, as part of institutional arrangements to manage housing recovery. Subgroups may encompass donor groups, technical assistance groups, financial assistance and financial services groups.

Coordination of technical assistance stakeholders should address not only technical issues, but also optimisation of resources available for technical assistance, including coverage, gaps, funding levels, and cost-effectiveness.

Coordination of funding should ensure a balanced allocation of funding to, and through, government and non-governmental, international and local actors.

Establish systems for information management, monitoring and evaluation of recovery progress and technical assistance progress.

Establish systems to account for funding of housing recovery including technical assistance activities (i.e. sources, timing, allocation, disbursement and reporting). Analyse monitoring, evaluation and financial data to inform policies and programming.

Develop pooled funding mechanisms for technical assistance to mobilise funding with shared accountability and to facilitate allocation and reallocation of resources across areas, activities and agencies.

Develop administrative and financial mechanisms for funding community organisations and community contracting.

Develop the capacity of local organisations to access, manage and account for funding for technical assistance activities.

Ensure institutional donor funding mechanisms do not cause competitive processes whereby winning applicants are included and losing applicants are excluded from meaningful roles in technical assistance policy and programme development and implementation. Promote collaborative and inclusive mechanisms to benefit from the contributions of broad coalitions of stakeholders. The funding of technical assistance should not be carried out through processes designed for the procurement of logistics items.

### Liaise with wider recovery

Coordinate technical assistance policies and strategies for housing recovery with technical assistance for settlement recovery, including risk management, land and planning related issues.

Coordinate technical assistance policies and strategies for housing recovery with

technical assistance for other construction sectors including schools, community facilities, infrastructure and commercial recovery.

## Links

DG ECHO Thematic Policy Document Shelter and Settlements
www.ec.europa.eu/echo/sites/echo-site/files/ss_consolidated_guidelines_final_version-20-02ev.pdf

OFDA Office of the United States Foreign Disaster Assistance. (2013) Washington.
www.scms.usaid.gov/sites/default/files/documents/1866/USAID-OFDA%20Humanitarian%20Shelter%20and%20Settlements%20Principles.pdf

Global Risk Financing Facility. World Bank.
www.worldbank.org/en/topic/disasterriskmanagement/brief/global-risk-financing-facility

Building Back Better. Achieving resilience through stronger, faster, and more inclusive post-disaster reconstruction. (2018). GFDRR. World Bank. Washington D.C.
www.gfdrr.org/sites/default/files/publication/Building%20Back%20Better.pdf

Unbreakable: Building the Resilience of the Poor in the Face of Natural Disasters (2017) GFDRR. World Bank. Washington D.C.
www.gfdrr.org/en/publication/unbreakable-building-resilience-poor-face-natural-disasters

*Source:* *Julius Mwelu/UN-Habitat.*

# APPENDICES

# Appendix A: Glossary of terms

All terms cited are defined by UNISDR.

An overview of more terms can be found here:

www.unisdr.org/we/inform/terminology

## Affected

People who are affected, either directly or indirectly, by a hazardous event. Directly affected are those who have suffered injury, illness or other health effects; who were evacuated, displaced, relocated or have suffered direct damage to their livelihoods, economic, physical, social, cultural and environmental assets. Indirectly affected are people who have suffered consequences, other than or in addition to direct effects, over time, due to disruption or changes in economy, critical infrastructure, basic services, commerce or work, or social, health and psychological consequences.

## Build Back Better (BBB)

The use of the recovery, rehabilitation and reconstruction phases after a disaster to increase the resilience of nations and communities through integrating disaster risk reduction measures into the restoration of physical infrastructure and societal systems, and into the revitalization of livelihoods, economies, and the environment (United Nations General Assembly, 2016[9]).

## Building Code

A set of ordinances or regulations and associated standards intended to control aspects of the design, construction, materials, alteration and occupancy of structures that are necessary to ensure human safety and welfare, including resistance to collapse and damage. Building codes can include both technical and functional standards. They should incorporate the lessons of international experience and should be tailored to national and local circumstances. A systematic regime of enforcement is a critical supporting requirement for effective implementation of building codes (United Nations General Assembly, 2016). Building codes are a subset of construction codes, which are more comprehensive in terms of assets covered.

## Capacity

The combination of all the strengths, attributes and resources available within an organisation, community or society to manage and reduce disaster risks and strengthen resilience.

- Coping capacity is the ability of people, organisations and systems, using available skills and resources, to manage adverse conditions, risk or disasters. The capacity to cope requires continuing awareness, resources and good management, both in normal times as well as during disasters or adverse conditions. Coping capacities contribute to the reduction of disaster risks.
- Capacity assessment is the process by which the capacity of a group, organisation or society is reviewed against desired goals, where existing capacities are identified for maintenance or strengthening and capacity gaps are identified for further action.
- Capacity development is the process by which people, organisations and society systematically stimulate and develop their capacities over time to achieve social and economic goals. It is a concept that extends the term of capacity-building to encompass all aspects of creating and sustaining capacity growth over time. It involves learning and various types of training, but also continuous efforts to develop institutions, political awareness, financial resources, technology systems

[9] United Nations General Assembly. 2016. Report of the Open-Ended Intergovernmental Expert Working Group on Indicators and Terminology Relating to Disaster Risk Reduction. Seventy-First Session, Item 19(c). A/71/644.

and the wider enabling environment.

## Disaster

A serious disruption of the functioning of a community or a society at any scale due to hazardous events interacting with conditions of exposure, vulnerability and capacity, leading to one or more of the following: human, material, economic and environmental losses and impacts.

Emergency is sometimes used interchangeably with the term disaster, as, for example, in the context of biological and technological hazards or health emergencies, which, however, can also relate to hazardous events that do not result in the serious disruption of the functioning of a community or society.

Disaster damage occurs during and immediately after the disaster. This is usually measured in physical units (e.g. square meters of housing, kilometres of roads, etc.), and describes the total or partial destruction of physical assets, the disruption of basic services and damages to sources of livelihood in the affected area.

Disaster impact is the total effect, including negative effects (e.g. economic losses) and positive effects (e.g. economic gains), of a hazardous event or a disaster. The term includes economic, human and environmental impacts, and may include death, injuries, disease and other negative effects on human physical, mental and social well-being.

The Centre for Research on the Epidemiology of Disasters (CRED) defines a disaster as: "a situation or event [which] overwhelms local capacity, necessitating a request to a national or international level for external assistance; an unforeseen and often sudden event that causes great damage, destruction and human suffering."

## Disaster risk

The potential loss of life, injury, or destroyed or damaged assets which could occur to a system, society or a community in a specific period of time, determined probabilistically as a function of hazard, exposure, vulnerability and capacity.

## Disaster risk reduction

Disaster risk reduction is aimed at preventing new and reducing existing disaster risk and managing residual risk, all of which contribute to strengthening resilience and therefore to the achievement of sustainable development.

## Disaster Damage

Occurs during and immediately after the disaster. This is usually measured in physical units (e.g. square meters of housing, kilometres of roads, etc.), and describes the total or partial destruction of physical assets, the disruption of basic services and damages to sources of livelihood in the affected area (United Nations General Assembly, 2016).

## Early warning system

An integrated system of hazard monitoring, forecasting and prediction, disaster risk assessment, communication and preparedness activities systems and processes that enables individuals, communities, governments, businesses and others to take timely action to reduce disaster risks in advance of hazardous events.

## Economic loss

Total economic impact that consists of direct economic loss and indirect economic loss. Direct economic loss: The monetary value of total or partial destruction of physical assets existing in the affected area. Direct economic loss is nearly equivalent to physical damage. Indirect economic loss: A decline in economic value added as a consequence of direct economic loss and/or human and environmental impacts (United Nations General Assembly, 2016).

## Housing recovery

'Housing recovery' refers to reconstruction, repair or upgrading of permanent durable accommodation or dwellings affected by a disaster, as well as the restoring or improving of the means of housing production, including regulatory systems, access to building materials, labour and finance.

## PDNA

Post-Disaster Needs Assessment is a synthesis of DaLA and human recovery needs assessment. It typically includes the recovery and reconstruction framework that guides the post-disaster recovery strategy. A unique aspect of the PDNA is that it is led and owned by the government of the affected country and assisted by a multi-disciplinary, multi-agency team comprising the World Bank, GFDRR, UN Agencies, European Commission, and other relevant stakeholders. The PDNA includes damage, loss, and macro-economic impacts on the affected economy; impacts on livelihoods, incomes, and human development; short, medium, and long-term recovery and reconstruction needs; and, measures for mainstreaming Disaster Risk Reduction in post-disaster recovery and reconstruction plans (GFDRR, 2017[10]).

## Prevention

Activities and measures to avoid existing and new disaster risks.

## Reconstruction

The medium- and long-term rebuilding and sustainable restoration of resilient critical infrastructures, services, housing, facilities and livelihoods required for the full functioning of a community or a society affected by a disaster, aligning with the principles of sustainable development and 'build back better,' to avoid or reduce future disaster risk (United Nations General Assembly, 2016).

## Recovery

The restoring or improving of livelihoods and health, as well as economic, physical, social, cultural and environmental assets, systems and activities, of a disaster-affected community or society, aligning with the principles of sustainable development and 'build back better,' to avoid or reduce future disaster risk (United Nations General Assembly, 2016).

## Recovery Framework

Establishes a common platform for the whole community to build, sustain, and coordinate delivery of recovery capabilities. Describes principles, processes, and capabilities essential to more effectively manage and enable recovery following an incident of any size or scale. Defines how emergency managers, community development professionals, recovery practitioners, government agencies, private sector professionals, non-governmental organisation leaders, and the public, can collaborate and coordinate to more effectively utilize existing resources to promote resilience and support the recovery of those affected by an incident (US Federal Emergency Management Agency, 2016[11]). A document that articulates a vision for recovery; defines a strategy; prioritizes actions; fine-tunes planning processes; and provides guidance on recovery financing, implementation, monitoring, and evaluation. An effective recovery framework is not a plan, but rather a strategy that complements the Post-Disaster Needs Assessment process by outlining long-term goals and communicating the shared principles according to which progress will be measured. (GFDRR, 2015[12]).

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[10] Global Facility for Disaster Risk Reduction. 2017. Damage, Loss, and Needs Assessment – Tool and Methodology. GFDRR Website. Accessed January 2017. www.bit.ly/2ihiY5O.

[11] US Federal Emergency Management Agency. 2016. National Disaster Recovery Framework. Second Edition. US Department of Homeland Security. www.bit.ly/2gdvYtz.

[12] GFDRR. 2015. Guide to Developing Disaster Recovery Frameworks: Sendai Conference Version. March. www.bit.ly/1iH7kh5.

## Rehabilitation:

The restoration of basic services and facilities for the functioning of a community or a society affected by a disaster (United Nations General Assembly, 2016).

## Recovery Sector:

Recovery themes or requirements that draw upon similar stakeholders, information, resources, and other commonalities that enable concerted and collaborative planning and management (FEMA, 2016[13]).

## Resilience

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

## Response

Actions taken directly before, during or immediately after a disaster in order to save lives, reduce health impacts, ensure public safety and meet the basic subsistence needs of the people affected.

## Retrofitting

Reinforcement or upgrading of existing structures to become more resistant and resilient to the damaging effects of hazards.

## Shelter

'Shelter' refers to temporary accommodation arrangements (including tents, temporary structures, rented or hosted accommodation).

## Technical Assistance

Technical assistance includes a broad range of inputs to inform, guide and add value to housing recovery undertaken by households and communities themselves, either with their own resources or with financial or material assistance.

Technical assistance describes measures that aim to improve recovery outcomes through the establishment, rehabilitation or development of systems, capacities, policies and programmes. Technical assistance operationalises a support approach; enabling informed choice and flexibility for affected populations, acknowledging their diverse needs and their primary role and responsibility in the housing recovery process and strengthening systems towards greater resilience.

Technical assistance is not limited to engineering expertise, but encompasses social, communication, information management, business development, legal, administrative and other expertise and assistance activities. The term 'socio-technical assistance' is used by some organisations to emphasise the importance of people as well as technology in assistance activities. Some categories of activities are described in other publications as 'institutional support', 'community facilitation', 'capacity building', 'advisory services' or 'quality assurance', usually reflecting the mandates of the assisting agencies.

For the purpose of simplification, in this document, we use the term 'technical assistance' as an umbrella term for all non-financial/material measures incorporating all expertise and all activities.

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[13] US Federal Emergency Management Agency (FEMA). 2016. Community Disaster Recovery Planning. FEMA Emergency Management Institute. Higher-Education Program. Course Instructor Guide.

Technical assistance for housing recovery ideally comprises a network of interrelated measures including: regulatory systems and institutional arrangements, the development of policies and programmes, standards and guidance, construction material and finance development, human resource development of knowledge and skills, public awareness, community mobilisation and engagement, quality assurance, monitoring and evaluation of recovery progress, and institutionalisation of recovery learning.

## Vulnerability

The conditions determined by physical, social, economic and environmental factors or processes which increase the susceptibility of an individual, a community, assets or systems to the impacts of hazards.

# **Appendix B:** Guiding principles for housing reconstruction

## Extract from safer homes stronger communities

### Guiding principles for housing reconstruction.

**1. A good reconstruction policy helps reactivate communities and empowers people to rebuild their housing, their lives, and their livelihoods.**

A reconstruction policy should be inclusive, equity-based, and focused on the vulnerable. Housing reconstruction is key to disaster recovery, but it depends on the recovery of markets, livelihoods, institutions, and the environment. Diverse groups need diverse solutions, but biases will creep in, so a system to redress grievances is a must.

**2. Reconstruction begins the day of the disaster.**

If traditional construction methods need to change to improve building safety, governments must be prepared to act quickly to establish norms and provide training. Otherwise, reconstructed housing will be no less vulnerable to future disasters than what was there before. Adequate transitional shelter solutions can reduce time pressure and should be considered in a reconstruction policy. Owners are almost always the best managers of their own housing reconstruction; they know how they live and what they need. But not all those affected are owners and not all are capable of managing reconstruction; so the reconstruction policy must be designed with all groups in mind: owners, tenants, and landlords, and those with both formal and informal tenancy.

**3. Community members should be partners in policy making and leaders of local implementation.**

People affected by a disaster are not victims; they are the first responders during an emergency and the most critical partners in reconstruction. Organizing communities is hard work, but empowering communities to carry out reconstruction allows their members to realize their aspirations and contribute their knowledge and skills. It also assists with psychosocial recovery, helps re-establish community cohesion, and increases the likelihood of satisfaction with the results. This requires maintaining two-way communication throughout the reconstruction process and may entail the facilitation of community efforts. A real commitment by policy makers and project managers is needed to sustain effective involvement of affected communities in reconstruction policy making and in all aspects of recovery, from assessment to monitoring.

**4. Reconstruction policy and plans should be financially realistic but ambitious with respect to disaster risk reduction.**

People's expectations may be unrealistic and funding will be limited. Policy makers should plan conservatively to ensure that funds are sufficient to complete reconstruction and that time frames are reasonable. Rebuilding that reduces the vulnerability of housing and communities must be the goal, but this requires both political will and technical support. Housing and community reconstruction should be integrated and closely coordinated with other reconstruction activities, especially the rehabilitation and reconstruction of infrastructure and the restoration of livelihoods.

**5. Institutions matter and coordination among them improves outcomes. Best practice is to have defined a reconstruction policy and designed an institutional response in advance of a disaster.**

In some cases, this will entail a new agency. Even so, line ministries should be involved in the reconstruction effort and existing sector policies should apply,

whenever possible. The lead agency should coordinate housing policy decisions and ensure that those decisions are communicated to the public. It should also establish mechanisms for coordinating the actions and funding of local, national, and international organisations and for ensuring that information is shared and that projects conform to standards. Funding of all agencies must be allocated equitably and stay within agreed-upon limits. Using a range of anticorruption mechanisms and careful tracking of all funding sources minimizes fraud.

**6. Reconstruction is an opportunity to plan for the future and to conserve the past.**

What has been built over centuries cannot be replaced in a few months.

Planning and stakeholder input help to establish local economic and social development goals and to identify cultural assets for conservation. Even a modest amount of time spent designing or updating physical plans can improve the overall result of reconstruction. Reconstruction guidelines help ensure that what is valued is preserved, while encouraging more sustainable post-disaster settlements. Improving land administration systems and updating development regulations reduces vulnerability and improves tenure security.

**7. Relocation disrupts lives and should be kept to a minimum.**

Relocation of affected communities should be avoided unless it is the only feasible approach to disaster risk management. If relocation is unavoidable, it should be kept to a minimum, affected communities should be involved in site selection, and sufficient budget support should be provided over a sufficient period of time to mitigate all social and economic impacts.

**8. Civil society and the private sector are important parts of the solution.**

The contributions of non-governmental organisations (NGOs), civil society organisations (CSOs), and the private sector to reconstruction are critical. Besides managing core programs, these entities provide technical assistance, advocacy, and financial resources of enormous value. Government should encourage these initiatives; invite NGO, CSO, and private entity involvement in reconstruction planning; and partner in their efforts. Government should also require accountability and make sure that these interventions are consistent with reconstruction policy and goals.

**9. Assessment and monitoring can improve reconstruction outcomes.**

Assessment and monitoring improve current (and future) reconstruction efforts. Unnecessary assessments can be minimized if there are policies that require institutions to share assessment data and results. Local communities should participate in conducting assessments, setting objectives, and monitoring projects. Using reliable national data to establish monitoring baselines after the disaster increases the relevance of evaluations. Monitor both the use of funds and immediate physical results on the ground and evaluate the impact of reconstruction over time.

**10. To contribute to long-term development, reconstruction must be sustainable.**

Sustainability has many facets. Environmental sustainability requires addressing the impact of the disaster and the reconstruction process itself on the local environment. The desire for speed should not override environmental law or short-circuit coordination when addressing environmental issues. Economic sustainability requires that reconstruction is equitable and that livelihoods are restored. Livelihood opportunities in reconstruction should be maximized. Institutional sustainability means ensuring that local institutions emerge from reconstruction with the capability to maintain the reconstructed infrastructure and to pursue long-term disaster risk reduction. A reliable flow of resources is essential and institutional strengthening may be required.

**The last word: Every reconstruction project is unique.**

The nature and magnitude of the disaster, the country and institutional context, the level of urbanization, and the culture's values all influence decisions about how to manage reconstruction. Whether government uses special or normal procurement procedures, how it weighs the concerns of speed versus quality, and what it considers the proper institutional set-up and division of labor will also vary. History and best practices are simply evidence to be weighed in arriving at the best local approach.

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