

TOOLKIT THE ERRA EXPERIENCE 2005 EARTHQUAKE

VOLUME

1



GUIDE FOR MANAGERS

Introduction and Summary

The ERRA Rural Housing Reconstruction Programme (RHRP) Experience is part of the Toolkit developed to assist project managers and policy makers engaged in large-scale post-disaster reconstruction programs make decisions about how to reconstruct housing and communities after natural disasters.

The Toolkit is modelled on, and should be read in conjunction with, the SAFER HOMES, STRONGER COMMUNITIES: A HANDBOOK FOR RECONSTRUCTING AFTER NATURAL DISASTERS, and is presented in 2 volumes. Volume 1 is a Guide for Managers and provides a quick introduction to the tasks and interventions required for reconstruction, using the essential lessons and learning from the 2005 earthquake, for guiding the development and management of disaster reconstruction programmes. Volume 2 presents the ERRA Rural Housing Experience in the form of an extended “case study”, the experience of the rural housing reconstruction programme undertaken by ERRA following the earthquake that struck parts of AJK and NWFP on the morning of October 8, 2005.

The RHRP post-disaster reconstruction began with a series of decisions that had to be made almost immediately. Despite their urgency, these decisions, and the manner in which they were implemented, are likely to have long-term impacts that will change the lives of those affected by the disaster for years to come. Those responsible for making these decisions had to do so without precedence to guide them. Although considerable expertise was available, it was not always pertinent or relevant to the situation that confronted the project management in 2005. The RHRP Experience provides information on the options that had to be considered in various aspects of reconstruction and provide insights into what worked. This may not tell Project Managers formulating reconstruction programmes after future disasters exactly what to do, but it should improve the likelihood of good outcomes from the work that is done.



Volume 1. Guide for Managers

The Guide takes those responsible for responding to post-disasters through the various processes, tasks and interventions involved in rural housing reconstruction. Volume 1 uses the same overall framework as Volume 2 (see below) that was developed by the Safer Homes Handbook.



Section 1. Assessing Damage and Defining Reconstruction Policy

- Early Recovery: Context and Processes
- Assessing Damage and Setting Reconstruction Policy
- Communication in Post-Disaster Reconstruction
- Housing Assistance Entitlement
- Land and Location

Section 2. Planning Reconstruction

- Land Use and Physical Planning
- Infrastructure and Services Delivery
- Environmental Considerations
- Housing Design and Construction Technology
- Cultural Heritage Conservation

Section 3. Project Implementation

- Community Organizing and Participation
- Institutional Arrangements for Reconstruction Management
- International, National and Local Partnerships in Reconstruction.
- Mobilizing Financial Resources and Other Reconstruction Assistance
- Training Requirements in Reconstruction

Section 4. Monitoring and Information Management

- Information and Communications Technology in Reconstruction
- Monitoring and Evaluation
- Mitigating the Risk of Corruption

FOR EACH INTERVENTION, VOLUME 1 PROVIDES A QUICK GUIDE ON:

- WHY** ▶ it is important, why it is needed – its role in the reconstruction process;
- WHAT** ▶ it is and what it consists of – what is included within its ambit;
- HOW** ▶ it is developed – the processes involved and the sequence and steps required
- WHEN** ▶ it is needed to be developed by – its sequence within the overall process; and
- WHO** ▶ it is produced by – the agency or institution charged with responsibility for it.

Wherever appropriate, references and examples are provided from the Guidelines and Recommendations of the Safer Homes Handbook, and to the experience following the 2005 earthquake.

Volume 2. The ERRA Rural Housing Programme Experience

The document follows the schema of the Safer Homes Handbook in presenting the specific experience of ERRA. As the handbook says “every reconstruction project is unique” and the relative importance and extent of each ERRA activity was not always the same as suggested by the handbook. The differences, on the ground and in the Programme, are highlighted by the text. Below is an overview of some of the key steps taken and decisions made, presented in each part.



Part 1, Reconstruction Tasks and How they were Undertaken, provides both policy decisions and the practical actions on critical reconstruction issues. Part 1 contains three sections that correspond to the principal stages of reconstruction: (1) assessment and policy making (2) planning, and (3) implementation. Below are summaries of the chapters contained in each of these three sections:

Section 1. Assessing Damage and Defining Reconstruction Policy

Chapter 1, Early Recovery: The Context for Housing and Community Reconstruction, presents an overview of the economic, political and social situation in Pakistan at the time of the 2005 earthquake and the institutional landscape project managers encountered in the post-earthquake setting beginning with the earthquake itself, and the sequence of events that unfolded. It also describes the roles that affected populations and various agencies took on in the post-disaster environment. This chapter also presents the arguments made in favour of and against providing transitional shelter. A number of common gaps or bottlenecks in the reconstruction process, including the funding gap, the planning gap, the implementation gap, and the participation gap, are described here. This chapter sets the tone for the rest of the handbook by describing a reconstruction approach that put affected communities in the centre, helping to set policy and organizing the entire reconstruction process.



Chapter 2, Assessing Damage and Setting Reconstruction Policy, discusses the assessment process that was used to diagnose the assistance needed and develop the housing policy and institutional framework and to identify capacity issues that arose in reconstruction, including housing damage assessments. Housing damage assessments are the door-to-door assessments that were used to assess and allocate housing assistance.

Chapter 3, Communication in Post-Disaster Reconstruction, outlines the development of a comprehensive post-disaster communications strategy, demonstrating the use of continuous, two-way communications to constantly monitor the relevance and quality of the outcomes of the reconstruction program. Case studies are presented on various aspects of this experience, including the importance of assessing the cultural context when designing communications activities and the use of beneficiary feedback as a monitoring and evaluation tool.

Chapter 4, Housing Assistance Entitlement, shows what was done to help ensure that housing assistance reached its intended beneficiaries and had the desired social impact on the ground. This chapter presents a table of the different categories that were assisted by the program and includes a matrix of criteria that was used to design a housing assistance scheme by addressing the following questions: Who is entitled? What form of assistance are they entitled to? How much assistance should they receive? Case studies are used to explain the logic of a different approach to providing reconstruction assistance.

Chapter 5, Land and Location, describes the reasoning behind the decision not to relocate households, but rather, except in very specific instances, to assist households to construct their new houses on the same site as before. However, for those who lost their land to landslides, or were made virtually landless because their houses were located on High Vulnerability sites, ERRA provided assistance for land acquisition as well as house construction.

Chapter 6, Owner-Driven Reconstruction, the central theme of the ERRA approach, is described along with the reasons that led to it. The advantages of the owner-driven approach are discussed as are some of the reactions from communities and households as well as the impact of the approach on households.

Section 2. Planning Reconstruction

Chapter 7, Land Use and Physical Planning was not one of the focus areas of the rural housing component of the ERRA programme, which was based primarily on the reconstruction of rural housing, using as far as possible, the original locations of the destroyed or damaged houses. (See Chapter 5 above). Unlike the urban component where land use and physical planning are a major aspect of the reconstruction programme, in the rural areas this was limited to a relatively few instances, arising mainly out of the need to provide land for those that had become physically, or virtually landless.

Chapter 8, Infrastructure and Services Delivery, explains both the short-term (lifeline) and longer-term (restoration/reconstruction) measures that were taken to provide infrastructure, mainly water supply and access roads.

Chapter 9, Environmental Considerations were amongst the key concerns that prompted the adoption of some of the key principles of the reconstruction programme: the use of salvage materials promoted in construction standards and technical support and the use of local materials promoted in construction standards and technical support. The use of timber in the “dhajji construction” of the latter was introduced only after checks and tests of their environmental impact, especially on deforestation. An EIA was carried out as a basis for decision-making.

The rural housing reconstruction offers opportunities to improve environmental performance and sustainability as well as reducing seismic vulnerability.

Chapter 10, Housing Design and Construction Technology, covers the range of critical issues associated with the design and construction of housing. ERRA had to decide whether or to what extent construction methods will be upgraded in reconstruction, and the extent to which local or indigenous methods should be incorporated. Issues covered include the choice of materials and building methods, the decision whether to repair/ retrofit or rebuild, and the potential for incorporating universal design standards in reconstruction.

Chapter 11, Cultural Heritage Conservation, was one of the reasons why the principle of respecting diversity was established in the original housing strategy but without anticipating the specific and intensive work which was required. To support and, in some cases, revive local traditional building skills required not just incorporating and promoting traditional construction, but designing and providing training and capacity building. That in turn required the documentation and analysis of traditional heritage construction and in particular, the building design and construction techniques and processes used in the Leepa and Manoor Valleys and Dhajji and Bhatar construction in general.

Section 3. Project Implementation describes various aspects of the owner-driven community-based approach to reconstruction.

Chapter 12, Community Organizing and Participation, documents how these concepts were used to operationalise and empower communities to lead their own reconstruction effort. It includes an overview of the ways in which communities and households managed the reconstruction process or otherwise participated in reconstruction, beginning with conducting participatory assessments and participating in the definition of reconstruction policy.

Chapter 13, Institutional Arrangements for Reconstruction Management, describes the need and necessity for the army to play a central role, especially in the early recovery period and how and why this was gradually transferred to ERRA. The chapter explains what was needed for ERRA in order to be effective. This chapter also describes the roles played by local government in reconstruction and how coordination between local officials and officials managing the overall reconstruction effort was ensured and managed.

Chapter 14, International, National, and Local Partnerships in Reconstruction, provides insights into what was required for successfully working with the variety of non-governmental entities that were at work in the reconstruction environment. This chapter describes in more operational terms how these agencies were organized and their interventions coordinated. The chapter also explains how non-governmental and civil society organizations were involved



in reconstruction and the guidelines on formalizing the relationship between ERRA and these organizations to help ensure that their actions contribute to larger development goals.

Chapter 15, Mobilizing Financial Resources and Other Reconstruction Assistance describes the efforts that were made to ensure that the resources that were pledged and promised by international donors and national agencies were delivered and on time. These included the need to provide effective tracking, monitoring and feedback mechanisms to assure donors and funders that reconstruction assistance was reaching recipients and meeting agreed goals and targets. The chapter points out the importance of coordinating and monitoring reconstruction finance, whatever its source, even at the project level, where agencies can inadvertently compete or duplicate efforts, both of which create disincentives for households and reduce the effectiveness of the overall reconstruction effort.

Chapter 16, Training and capacity Building for Reconstruction, provides insights on the development of a large-scale training program aimed at improving the quality of housing condition assessments and of reconstruction. The approach described in this chapter incorporates the training required for the initial and detailed assessment of housing conditions, the design of training materials, and the use of model buildings as a training tool. One of the most important concerns in implementing training or facilitation at the project level in such a large disaster was scaling up these interventions to ensure that the reconstruction effort is not delayed.

Section 4, Monitoring and Information Management, helps project managers with advice about technology use in reconstruction, project monitoring, and involving affected communities in project oversight.

Chapter 17, Information and Communications Technology in Reconstruction, describes the variety of technologies used in post-disaster assessment and monitoring, and especially the rapid expansion of and crucial role played by mobile phones. Having a well-developed and highly competitive industry in the other parts of the country helped to facilitate this process in ways that the previously state-controlled communications sector could not have done.

Using Chapter 18, Monitoring and Evaluation, defines the parameters of monitoring in reconstruction and the decisions taken on whether and how to evaluate project impact. The chapter shows how the use of a mix of qualitative and quantitative data, including data collected in a participatory manner, and household survey data was used.

There is always a significant risk of corruption in reconstruction, and Chapter 19, Mitigating the Risk of Corruption, describes what measures were taken and their effectiveness in controlling and minimising corruption.

Each of the above Chapters is structured using the following format

- **Guiding Principles** – of the Rural Housing Programme
- **Introduction / Context** – in which the Programme was operating
- **Key Decisions** – made for the Programme
- **Technical Issues** - raised during the course of the Programme
- **Risks and Challenges** – addressed and responded to by the Programme
- **Results and Achievements** – of the Programme

In addition, as and where necessary this supported by Resource / reference materials: forms, SOPs, docs, reports, data.



Volume 1. Guidelines for Managers

1. Introduction

- a. Objective
- b. Using the Toolkit

2. Response Development

- a. Initial Assessment & Outline Strategy¹
- b. Assessing Damage and Setting Reconstruction Policy
- c. Communication in Post-Disaster Reconstruction
- d. Beneficiary Eligibility/Selection
- e. Reconstruction Approaches - Owner-Driven Approach
- f. Transitional Shelter
- g. Assistance Packages – Financial, Physical, Support

3. Reconstruction Planning

- a. Land Use and Physical Planning
- b. Infrastructure and Services Delivery
- c. Environmental Planning
- d. Housing Design and Construction Technology
- e. Governance: Social Aspects and Inclusion; Role of Female Heads
- f. Cultural Heritage Conservation

4. Project Implementation

- a. Institutional Options for Reconstruction Management
- b. Community Organizing and Participation
- c. International, National, and Local Partnerships in Reconstruction
- d. Training Requirements in Reconstruction

5. Monitoring and Evaluation

- a. Addressing Grievances and Complaints



¹ Each of the subtasks will have the details of Why, What, When, How and Who.

1. Introduction

A. Objective

The objective of the Toolkit is to provide a starting point of reference for those responsible for developing and managing the reconstruction response to a disaster. In previous disasters, the absence of an easily-accessible document has often led officials to “re-invent the wheel” when faced with such a task for the first (and perhaps only) time in their professional career. The sudden onset and enormity of the task they face, coupled with the obvious sense of urgency, has left many with little time to reflect, and feeling that they are facing a unique challenge has deterred them from looking for precedents. Despite the spread of the internet and increasingly effective search engines, getting hold of advice and information is not always easy. Often too, the documents that are available are voluminous and often directed at technocrats.

Pakistan’s experience with the earthquake of 2005 has been held up as a model of effective response, especially regarding the Rural Housing component - an undertaking larger and more complex than any experienced in the country and perhaps even in the world. The response has been that much more commendable given Pakistan’s previous experience and limited exposure to such events. The lessons to be learned from that experience are many and not limited to post-disaster response but many apply equally to the national development effort.

The objective of the Toolkit is therefore also to capture and make easily available the lessons from the ERRA experience.

The Toolkit provides a short introduction to each of the various stages of developing and managing disaster response using a simple framework of

- **WHY** - that stage is necessary: how it fits into the overall post-disaster reconstruction process;
- **WHAT** - the stage consists of and what it covers;
- **WHEN** - the stage is likely to be required: what preceded and follows after it;
- **HOW** - the stage needs to be dealt with: the actions and decisions required to be made; and
- **WHO** - are the appropriate organisations and institutions best suited to manage and implement that stage

B. How to Use the Toolkit

Volume 1 - this document - provides a very brief snapshot of the process of formulating and implementing a post-disaster response. It provides a quick indication of what needs to be done and the main issues and considerations that stakeholders need to keep in mind. It also highlights the way each stage was handled during the 2005 Earthquake and the post-disaster reconstruction and it cites extracts from the SAFER HOMES, STRONGER COMMUNITIES: A HANDBOOK FOR RECONSTRUCTING AFTER NATURAL DISASTERS. That Handbook, developed on the basis of experience covering a wider range of disasters and responses, also acts as a point of entry to the broader and more in-depth literature relating to disaster-response.

Using Volume 1, will allow a quick and effective response to be initiated and the worst mistakes and errors avoided. It should also add a degree of comfort that in following it, nothing important is being overlooked and unforeseen negative impacts will be minimised. Where appropriate, the reader is directed to the more substantive documentation and reference provided by the ERRA Case presented in Volume 2. - including actual examples of the forms and formats developed by ERRA and illustrated examples of the detailed actions taken.



2. Response Development

A. Initial Assessment & Outline Strategy

WHY ► After a disaster there is the obvious and immediate need to help in the relief and recovery of the affected populations. Creating conditions, or moving people to areas that save them from further harm and looking after the injured and providing food and water are the first priority, followed by the need to provide some form of shelter and sanitation.

While most of this will initially be done by who-ever is able to and is there, it is important to initiate a more systematic process of assessment. The primary purpose of the immediate assessment will be to get a better understanding of the scale and nature of the disaster impact so that the relief and recovery effort can be better managed.

Once an immediate assessment is available and the relief and recovery effort has begun, the planning of the Response should be started. There are two reasons for this:

1. Planning the response, and initiating the reconstruction takes time, and therefore, the sooner it is started the better
2. As soon people have recovered from the initial shock, and are able to, they want to get their lives back, and housing is an integral, often central component of this. Doing something positive also helps alleviate grief and pain. If there is no response plan, many households and agencies might initiate action that may later prove redundant, or even an obstacle to safe reconstruction.



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.

SAFER HOMES, STRONGER COMMUNITIES: A HANDBOOK FOR RECONSTRUCTING AFTER NATURAL DISASTERS, GFDRR, IBRD, 2010

WHAT ► The two components of this stage are:

1. the **initial assessment**, and based on this,
2. the **outline strategy**.

The **initial assessment** provides the first estimates of housing need – how many houses of what type are needed – but it also looks at the other components of housing: land, infrastructure, community facilities and amenities. More importantly, it also assesses the need for the other ingredients required for housing: building materials, building skills, technologies and processes.

The initial damage needs assessment (DNA) will, most likely be carried out as a separate exercise and will focus on quantifying the overall damage and the needs for humanitarian and shelter assistance. The primary purpose of the DNA is to get an understanding of the magnitude of the disaster, its impact and therefore the scale of the relief (and reconstruction) effort. It is this document, more than anything else that helps determine whether this will require a local, national or international response.

As soon as the details of the disaster and its impact start emerging, the formulation of the outline strategy needs to be initiated. The **outline strategy** needs to identify the key decisions that have

to be made regarding the reconstruction: the implementing agency; eligibility criteria; assistance entitlement. These will all be modified when the actual strategy is formulated after more details become available.

However, for purposes of the outline strategy, a different set of information and details are required, and at the initial stage, rather than wait until more detailed assessments can be carried out to help strategy formulation, the initial assessment relies on qualitative data that can be used in conjunction with the DNA to better assess reconstruction needs.

The **initial assessment**, as well as getting more information on the damage to housing and associated infrastructure, also tries to collect information that will help understand better the housing damage and state of the housing construction sector in the affected area and its ability to meet the housing reconstruction needs.

This will need an initial assessment of housing conditions and construction – both before the disaster and after. It will also need information regarding the construction of housing in terms of building materials, and construction skills, and manpower used and available.

After the 2005 earthquake, there was an initial assessment of the damage, carried out almost immediately after the earthquake, primarily by the Revenue Board, using the network of Patwaris - land record officers at sub-division or Tehsil level. As the lowest state functionary in the Revenue Collection system, their job encompasses visiting agricultural lands and maintaining record of ownership and tilling. They were thus familiar with the pre-earthquake situation and able to provide a quick estimate of the overall damage.

Although the initial damage and needs assessment did provide ERRA with some idea of the damage and the funds that were required for the reconstruction, it also highlighted the need of a detailed damage assessment of each house in order to put them in various categories and to determine the level of response from the government side. Only then could a policy response be formulated, and there was considerable pressure to do so from amongst the many national and international NGO's that wanted to work in the housing sector, as it dealt with the most basic human need of shelter.

WHEN ► As has been indicated, this needs to be done as soon as possible – keeping in mind that this is the outline strategy and will, perforce, have both information and output gaps

After the 2005 earthquake, the initial damage assessment started the day after the earthquake and was followed by a more structured assessment in the weeks immediately after.

HOW ► The outline strategy should be drafted in response to the DMA and the initial assessment, setting the main parameters of the parameters. The initial draft should be circulated and discussed amongst the various stakeholders, culminating in a dialogue so that agreement can be reached on the salient features and to ensure that there are no obvious gaps or overlaps. As well as benefitting from participatory consultation, this also helps ensure that the stakeholders are made aware of what is being planned and have a better understanding of the objectives. This will help develop a coordinated response and eliminate rumours and speculation, not least amongst the affected households and line agencies.

WHO ► The task of coordinating and directing the initial assessment and drafting the outline strategy should fall to the agency responsible for coordinating the reconstruction effort. Depending on the nature and scale of the disaster and the areas affected, this should be the Disaster Management Agency at the appropriate level. If the disaster and its impact is limited to a District, then it should be the District DMA, if it affects more than one District, the Provincial DMA would be more appropriate, and if it affects more than one Province, the effort should be the responsibility of the National DMA.

At the time of the 2005 earthquake, there was no dedicated Disaster Management Agency at the National level (the Revenue Department had the responsibility for Disaster Management at the District and Province level). Therefore a special purpose vehicle, ERRA was established to coordinate the national effort. Since then a National Disaster Management Agency has been established.

B. Assessing Damage and Setting Reconstruction Policy

WHY ► The initial damage will have been assessed using “quick and dirty” methods in order to get a rapid approximation of the scale of the disaster and the need for assistance, and this will have been used to outline the principles of the reconstruction strategy. To detail and set the reconstruction strategy and programme its implementation, a more accurate assessment of the damage is required, based on the outline strategy.

As well as being an essential step in the process of moving towards reconstruction and eventual resumption of normal life, damage assessment is also another means to demonstrate on the ground that something is being done. Involving the community also helps motivate people to start getting back to thinking about the future instead of being overwhelmed by the recent disaster.

WHAT ► To an extent this is almost a reiteration of the first steps, but with a better sense of direction (derived from the outline strategy) the accuracy can be considerably improved. Not only is it more likely that there will be more time to carry out the assessment, but what has to be assessed will be better defined. In assessing damage and setting policy, it is necessary to both quantify and quality the damage and determine the policy response for reconstruction. There are various options for reconstruction, ranging from a reconstruction of what was there before to using the opportunity to build back better. There is also the question of who should be responsible for reconstructing – between the community and the government and donors. The reconstruction policy will decide, and that in turn will determine what damage needs to be assessed, and the parameters.

The choices are largely a function of resources: after most disasters there is an instinctive, emotional response to assist all those affected to rebuild their houses, communities and their lives, and to do so in as robust a manner as possible. The larger and greater the extent of the damage, the greater the instinct to help, and the more so if the disaster was sudden, unforeseen and patently not the fault of those affected. However, since there is also the need to be fair and meet the needs of all, the needs have to be scaled to a level where they can actually be met.



Recommendations for Policy Formulation

1. Conduct multi-donor assessments whenever possible, using standardized assessment methodologies.
2. In designing the assessment and data collection, take into consideration how the information will be used and shared, the biases of the assessors, and the need for training.
3. Treat national and sector-specific data collected during assessments as public information, while respecting principles of confidentiality, to reduce duplication of data collection efforts.
4. Evaluate the needs of different groups and individuals (such as men, women, the elderly, and children) during assessments. Seek out marginalized groups and evaluate their needs and interests as well.
5. Advocate for a Communication-Based Assessment at the beginning of the project cycle to ensure that the reconstruction program is designed based on its results.
6. Consult with the community regarding the need for information and consider using community-led assessments to complement the information gathered from traditional assessment methodologies.
7. Establish a clear system of damage categories for housing, and try to carry out housing damage assessments before announcing the housing assistance scheme.
8. Observe the warnings regarding the announcement of reconstruction policy, such as the need to consider the impact of short-term shelter decisions on longer-term reconstruction.
9. Understand that the reconstruction policy should be one of the primary messages to be passed along to the public through the communication plan. Remember that what's important is what people hear, not what is said to them.
10. If reconstruction is not going well, or there are concerns about institutional capacity for reconstruction, conduct a housing sector assessment to identify whether assistance may be needed.

SAFER HOMES, STRONGER COMMUNITIES: A HANDBOOK FOR RECONSTRUCTING AFTER NATURAL DISASTERS, GFDRR, IBRD, 2010

After the 2005 earthquake, there was a need for a uniform assessment criteria and full spatial coverage so that the maximum number of people could access the program benefits. A need for an integrated damage assessment was felt but as other sectors were not ripe for it at that point the exercise was only confined to the house damage assessment.

ERRA did not make use of the damage data available with the local governments as it was based on the number of assets that had existed before the earthquake. Whereas ERRA was looking for a “rationalized construction” policy where it was not reconstructing a “facility for a facility” but was trying to address the present and future needs by either upgrading a facility or by altogether replacing it, an approach that required a comprehensive damage assessment by ERRA.

The following Guiding Principles were adopted

- Comprehensive damage assessment, in a cost-effective and time-bound manner
- Consistent and transparent damage assessment criteria
- Community validation mechanism to avoid large number of grievances
- Grant Eligibility should be subject to ownership or authorization from the owner
- Signing of Memorandum of Understanding with grant beneficiaries
- Maximizing program outreach - Local solutions for local problems

WHEN ► This is another of the many steps that needs to be taken as quickly as possible after the initial relief and recovery has begun. It is also made up of a series of predictable steps that are easily identified and the necessary training and the capacity built for as part of disaster mitigation and prevention processes so that it can be quickly put in place and implemented.

In most cases, in reality, this will be an-going process, being refined and adjusted as it is being carried out. This is especially so if the disaster has affected a large area and/or it is difficult to cover all of it quickly. Nevertheless, it is better to have the essential ingredients of the policy settled before embarking on the damage assessment since the process acts as both an assessment and an information-and-awareness-building process and is an integral component of the information and communication process.

After the 2005 earthquake, Although the initial damage and needs assessment did provide ERRA with some idea of the damage and the funds that were required for the reconstruction, it also highlighted the need of a detailed damage assessment of each house in order to put them in various categories and to determine the level of response from the government side. Only then could a policy response be formulated, and there was considerable pressure to do so from amongst the many national and international NGO's that wanted to work in the housing sector, as it dealt with the most basic human need of shelter. There was a dire need to coordinate all the activities of the various partners in the housing sector and to provide them with the policy framework to work with.

ERRA was confronted with many questions before the start of the program but was able to resolve them in the shortest possible time and in consultation with all the stakeholders. Some of the problems were:

Policy Level

- Who should carry out the damage assessment – who has the capacity to deliver in the time bound and cost effective manner
- The program could not wait for the outcome of the damage assessment and certain activities had to be started concurrently such as eligibility determination
- Should the damage assessment be carried out once all the people had returned back from camps and from other parts of the country or it should be started immediately
- How to make it as less controversial and as inclusive as possible – a community validation mechanism was required
- How to ensure uniform, but objective, assessment and full spatial coverage
- Which activities should be started concurrently with the damage assessment
- How to get the authenticated data regarding the villages and union councils in the area
- Definition of house

Technical

- What kind of templates to be used for the damage assessment
- How to access some of the primary damage data available with the local governments and the

- Army from early disbursement of initial tranche of Rs.25,000
- Who is to train the damage assessment teams
- If the owner of the house not available – who is to sign the MOU
- How to use technology during the damage assessment such as GPS and pictures to avoid double assessment
- How to ensure that the exercise remains transparent and team members serve as a check on each other

Housing Damage Assessment Tools

| Tool | How the tool is applied | Output |
|--|---|--|
| 1. Initial reconnaissance walk | The initial reconnaissance entails a walk through the affected area to get a general sense of the type, extent, and range of damages. The intelligence gathered at this stage will help in the design of the household survey instrument and the damage classification system. Who does it? Assessors with engineers, local officials, and community members. | Initial impression of types and extent of damage. |
| 2. Habitat mapping | Use habitat mapping to create a “bird’s-eye” view of the disaster damage based on local information by identifying each house, locating it geographically, and providing an initial categorization of damage. The map shows how the damaged houses relate to each other and to public buildings and common areas. Mapping can be carried out using any technology, from hand drawing to high-resolution GIS data, so long as the needed information is gained, although local information will be lost by using only a high-tech approach. Information from the habitat map should be transformed into a list that is cross-checked against a cadastre or the civil registry database. One mapping technology can also be used to validate another (artisanal mapping against the cadastre or GIS data). In a community with caste or other social distinctions, this activity can be conducted by sector and aggregated later. Who does it? Trained assessors, some of whom may be local officials and/or community members. | Visual representation of location of damaged and undamaged houses and initial damage categories. List of properties, addresses, and relation to built environment. |
| 3. Village transect | Use the village transect to identify patterns of housing damage and relate the damage to settlement patterns, the local geography, environmental features, and other land uses. Elevation drawings or other visual tools can be used to convey the degrees and types of damage as they relate to these features. This information is used to make decisions about environmental management, as well as relocation, resettlement, and the organization of the reconstruction process. Who does it? Trained assessors together with community members. | Site-specific data and relation of damage to environmental features and land uses. |
| 4. Household-level survey | The household-level survey provides data for both administrative purposes (tenure of property, family characteristics, category of damage) and technical purposes (housing materials, location and specific nature of damage, potential for repair). These data are collected on a standardized form tailored to the disaster, and the data are later entered into a database for the project. As part of this process, building damage levels are assigned. A wide range of persons can conduct the survey, if properly trained. However, even if engineers, architects, or building inspectors are brought in to conduct the surveys (their involvement is strongly recommended), they must be sufficiently trained and tested on the use of the survey instruments to ensure consistent results across surveyors. Involving in the surveying those who will later train builders is strongly recommended. The assessment must explain the physical mechanisms that caused the damage in order to provide data for reducing the vulnerability in designing reconstruction. Who does it? Trained assessors (chartered surveyors, engineers or architects) together with local officials and/or | Detailed property and household data. |
| 5. Photographic documentation | Create a photographic database of each damaged house, ideally with the owner present in the photo. This helps to validate other data and can serve as the baseline for a visual monitoring system for the reconstruction process. Who does it? Photographers trained in the documentation process (can be local). | Visual documentation of damage at the household level. |
| 6. System to number, classify, and label buildings | If no numbering system exists for lots in the affected communities, create a simple temporary numbering system for the purpose of managing the reconstruction process and assign numbers to houses during the household survey. Who designs it? Local officials with community input. Develop the classification system ⁶ for levels of damage and train the surveyors in its use. Generally, there should be no more than three categories. The surveyors should be sufficiently trained and tested in the use of the classification system to ensure consistency in its application. Who designs it? Engineers/building surveyors with local input. the owner present in the photo. This helps to validate other data and can serve as the baseline for a visual monitoring system for the reconstruction process. Who does it? Photographers trained in the documentation process (can be local). | Universe of numbered and classified houses. |

HOW ► There are number of tools available for damage assessment (see Box across) and many others that can be borrowed and adapted from more general housing assessment and Rapid Analysis methodologies.

After the 2005 earthquake, ERRA used a “Household-level Survey” to arrive at a comprehensive record of housing damage as well as beneficiary identification. An important consideration was the need to ensure total coverage and avoid accusations of either missing or fraudulent claims and compensation. Each household was required to sign an MOU on the spot confirming the survey.

Given the poor quality of the data base prior to the disaster, extensive use was made of photographic data and evidence and the extension of the coverage of the National Identity Card to all the households as well as the introduction of a house-numbering system.

The damage assessment exercise was essentially a technical one with the primary objective of assessing the degree of damage suffered by the house. The basic technical issue was to come up with a damage assessment form template and MOU on which the house can be assessed. ERRA asked NESPAK to come up with the template and tasked its Legal wing to devise them. The donors were having a keen interest in the developing of templates and wanted more detailed assessment to be done on the form.

The following basic principles were kept in mind while devising the templates:

- It should be a one-page form
- It should mention all the three categories of house damage and the engineering methodology to arrive at it
- The form preferably should be in URDU as well – however, this could not be done as it was difficult to make it compatible with the NADRA MIS, however, the MOU was devised in URDU for the easy understanding of most people
- Maximum possible personnel information to be mentioned in the form including the bank information as the money was to be disbursed as per the bank accounts
- It was decided to bar-code each form but again, this could not be done due to shortage of time
- Each damage assessment form to be uniquely numbered – and the same number to be used for the MOU.
- The form should contain spaces for the signatures of all the concerned parties of the household, and the MOU should be in duplicate so that one copy can be given to the house owner.
- The form should contain some primary fields that must be filled by the AI teams without which it would not be punched into the MIS and was returned back to the field for re-filling.

WHO ► Depending on the methodology and the process, deciding on the organisation or institution tasked to undertake the assessment is essentially one of who is available, willing and available. In general, it is better to consider using an existing institution rather than establishing a new one, although in most instances it will be necessary to augment the manpower. As well as capability and capacity – which can be enhanced through appropriate on-the-job training, it is important that the organisation be able to command respect and have the trust of the affected population in order to minimise accusations of favouritism or bias. It is also almost certainly going to be the case, that designing the templates and indeed the survey will have to be done by professionals – as indicated by the tools’ Box above.

After the 2005 earthquake, ERRA explored many options to identify a suitable agency to carry out the assessment in a time-bound and cost-effective manner. These efforts included from tasking its general consultant NESPAK to undertake the task to delegating or subcontracting it to other national and international NGOs, but it could not materialize due to the following:

- The nature of work was very controversial and taxing – and there were not many volunteers to do the job
- There was hardly any organization which could mobilize quickly on the ground and had the technical, human and financial wherewithal to carry out the exercise
- Some NGOs were willing to carry out the exercise in some union councils, where either they were working or their local partners had pre earthquake presence, but ERRA wanted to distribute the area between a maximum of two agencies to ensure uniformity in the assessment and easy monitoring by ERRA. The local patwaris were in any case going to be a

part of the composite assessment teams as a concerned member dealing with the revenue record but the entire task of damage assessment could not be handed over to them due to its technical nature for which the patwaris were not the ideal choice.

Key Decisions

- Army was entrusted with lead role in carrying out the damage assessment
- Kept the policy flexible with room for local solutions for local problems
- Representation from the provincial and the state government in the assessment process to make it more inclusive
- Use of legal instruments to overcome the eligibility issues
- Swift closure of the blanket assessment with limited re-assessment afterwards

C. Communication in Post-Disaster Reconstruction

WHY ► The key to the success of any programme is the ability to understand the needs of its clients and for the clients to understand the programme and how it operates so that its impact and effectiveness is maximised. Having a good communications system in place right at the start, built into the reconstruction process as an integral component will avoid many problems and ensure a smoother implementation. Most importantly, an effective communications mechanism will help reduce rumours and misinformation – deliberate or accidental – that often proves the downfall of otherwise well designed and well-intentioned programmes.



WHAT ► A communication strategy needs to be designed to facilitate two-way communications and should be an integral component of the reconstruction process. Communication covers all forms information-conveyance: verbal, visual and experiential. Every act, and the way it is carried out, carries along with it messages that may prove more powerful than those formally presented by a poster or other media campaign. It is not about the message being communicated by the reconstruction agency, but about the message being received by the affected population, and often, the community at large, that matters and is decisive.

Therefore the communication strategy has to be carefully designed, taking into account not just the language but also the culture and lifestyles of the communities. Disaster-events have the ability to speed-up change, often radically, and even if it cannot anticipate these, a communication strategy should be designed to capitalise on any changes that occur that may alter the acceptability or receptiveness of particular messages and the way in which these are transmitted to and internalised within the community.

At the time of the 2005 earthquake, the general level of infrastructure in the affected areas was rather poor, and with the disruption following the earthquake, communications were made even more difficult. Unlike the rest of the country, mobile phone penetration was very low, and this was not considered as a viable channel for mass communication. However, the earthquake prompted a phenomenal rise in the use of mobiles throughout the region and quickly became the communication media of choice, particularly for a community many of whose members were employed out of the region. Similarly, the ability of the TV media to report on events as they happened had a major impact on the community via the messages that it conveyed to relatives and supporters outside the region. This too was not adequately captured by the communication strategy.

Guiding Principles from the Lessons Learnt from the 2005 Earthquake

- An effective communication strategy at the lead organization level helps build good relations between ERRA and all the stakeholders involved
- People will use information available and not wait for the policy formulation. Therefore, broad policy parameters need to be disseminated as soon as possible.
- Messages need to be unified under one information campaign to avoid confusion
- Feedback channels need to be established to bring necessary changes in the policies and information development and dissemination
- Proactively target groups that are not necessarily the direct affectees of the disaster but who can have a positive influence

After the 2005 earthquake, the objectives of the communications strategy were defined to be to:

- Identify target audiences and rapidly appraise and prioritize the overall information needs for the ERRA housing program.
- Immediately commence the formulation of policies or at least establish the broad parameters of policies so that ERRA had some information to give to the people.
- Bridge vital information gaps for different target groups and stakeholders, specially the end-beneficiaries of the housing program, prior to, or concurrent with, the commencement of the housing damage and eligibility verification program planned by ERRA.
- Assure the affected population that housing assistance from the government, both in the form of financial as well as technical assistance, shall be available by a certain date, in order to quell unrest, discontent, and grievances, especially those arising from lack of proper/sufficient information
- Launch a pre-emptive behavioural-change campaign (BCC) among the affected population, emphasizing the need for 'building back better'; encouraging camp populations to return by highlighting the need for in-situ construction and minimizing relocation; dissuading people from constructing seismically unsafe houses, and, counter and stop the promotion and sponsorship of such construction
- Supporting ERRA and local level functionaries in interacting with the media and the public at large in forming a well-informed view of the project, and maintaining a smooth and regular flow of information to key stakeholders throughout the various stages of project implementation.

WHEN ► As an integral component of the reconstruction strategy, communications should be considered and incorporated right from the very start. However, since the need for information is the greatest immediately following a disaster and the following relief and recovery, that is when rumours are likely to spread that could have a disproportionately adverse impact on the reconstruction. Therefore, even as the strategy is being designed, care should be taken to ensure that to the extent possible, messages and communications, at least from and between official agencies and organisations are co-ordinated and consistent.

After the 2005 earthquake, there was a constant need of coming up with, revising and updating "frequently asked questions" and ensuring that they reflected the diversity of the target audiences. It would be important to understand the importance of compiling FAQ's as they can serve as a wealth of knowledge and serve as a reference for the future disaster program management.

Communication after the 2005 Earthquake

- By the end of 2006 All HRCs organised display areas where building techniques were demonstrated. Information boards were created for display in prominent locations in 40 different Union Councils. Information Assistants were hired at every HRC as well as critical areas not covered by HRCs, including Upper Neelum Valley and parts of Abbottabad. Information Assistants role was to disseminate information materials at Union council level and provide orientations at prominent locations in all 87 Union councils.
- The people affected voted for radio as the preferred medium of information, and that helped in devising a socially acceptable program in infotainment format that was aired through three radio channels that broadcast across the affected areas. Due to its popularity and the need to reinforce messages, the show aired live once a week and was then re-aired 5 times a week to maximize listenership.
- In April 2007 a campaign was launched by ERRA and UN HABITAT regarding the usage of 8 inch cement blocks. This included radio programmes, printing and distribution of flyers and banners and billboards illustrating block recommendations.
- In mid-2007 it was decided to identify and assist in building model houses in as many communities as possible to support and facilitate reconstruction. Information kiosks were also set up in towns and villages to facilitate the flow of information.

The information campaign has to be consistent with the program phases. For example, during the damage assessment phase in the field, the messages should revolve around the criteria governing the damage assessment. Similarly different phases of the program will require different kind of messages differing in tones as well. The earlier messages may have more informative and motivational tone to them followed by a message highlighting the penalty clauses of the MOU signed between people and ERRA. Each phase of the information campaign needs to be clearly demarcated, with stocktaking at its end, so that the messages of the following phase can be more effective.

The three stages of the information campaign were:

- **Phase 1** Contained all the general messages on ERRA Rural Housing Program and ERRA Policy in general.
- **Phase 2** Contained all the basic messages to motivate people to reconstruct and ways to access the cash grant: the eligibility criteria, tranche disbursement and the assisted and inspected construction regime.
- **Phase 3** Contained advanced messages to encourage people to get training and reconstruct seismically safe houses as well as direct information on seismic safety aspects for behavioural change towards a culture of compliance: If house is not seismic compliant - no cash grant will be made and penal clauses of the MOU to be invoked in the case of no construction being done.

HOW ► Since it is in the nature of a post-disaster situation, circumstances will change, and policy will often emerge gradually. Therefore, the communications strategy too should be capable of reacting appropriately and imaginatively on the basis of feedback. Before deploying any large-scale strategy, the medium and the message should be rigorously field-tested through pilots. Two-way communications has been stressed, but feedback is only useful if it is incorporated into the decision-making process, and of course, that it reports ground reality and relays messages accurately and in time.

Recommendations

1. See communications in housing reconstruction as a tool that can improve stakeholder participation and ultimately the suitability of the outcomes.
2. At the same time, realize that two-way communication (dialogue) is not only about achieving the project's objectives but also about giving voice and dignity to vulnerable and marginalized people.
3. Don't allow the urgency to implement to shortchange communications.
4. Adopt a multi-track, dialogue-driven communications strategy, which allows beneficiaries to provide input, ideas, and feedback, rather than employing a one-way (information dissemination) approach.
5. In developing the communications strategy, focus first on the messages that will be effective with people, before selecting media.
6. Adapt communication tools to the targeted audience and its preferred and trusted ways of communicating.
7. Tailor the communications strategy to reflect contextual variables.
8. Incorporate communications as early as possible in the process and sustain it throughout the project cycle. Be willing to redefine and adapt the strategy during the project as results are realized.
9. Ensure that communications within government and with other funders is open and results in a unified message to the affected population.
10. Incorporate feedback about the effectiveness of the communications strategy in a timely manner to improve reconstruction outcomes.

SAFER HOMES, STRONGER COMMUNITIES: A HANDBOOK FOR RECONSTRUCTING AFTER NATURAL DISASTERS, GFDRR, IBRD, 2010

WHO ► Designing and implementing a communication strategy is a complex task and should be entrusted to a professional organisation. Where such an organisation, or capacity does not exist within government or its agencies, it should be commissioned. Ideally, all official communications should be managed by and channelled through a single agency to minimise different versions of information being communicated.

After the 2005 earthquake, it was evident very early on that there was an abysmal lack of information specifically targeting the beneficiaries of the Housing Reconstruction Strategy. The initial lack of appropriately targeted information on housing reconstruction had a detrimental effect on the return of internally displaced people from the camps to their places of origin, as they were unable to make informed decisions. ERRA could publish advertisements in the newspapers through the Ministry of Communication's Press Information Department, but ERRA soon realised that devising suitable messages had to be done by someone closely associated with the program, knowing both the program and the needs of the people. The task was therefore entrusted to a reputable media firm, a professional firm that was also running similar campaigns for other ERRA projects and ERRA initiated its mass information campaign in April 2006 with their assistance.

In addition to this UN-HABITAT was also tasked by ERRA with the development of public information materials for housing reconstruction. ERRA started organizing regular coordination meetings of all the stakeholders; established toll-free help lines to listen to peoples' queries and respond to them; and disseminated messages using the radio and TV channels. The main goals to achieve were: (a) to disseminate ERRA financial and technical assistance policies in order to allow beneficiaries to make informed decisions, and (b) to widely promote ERRA approved earthquake-resistant building techniques among beneficiaries who were reconstructing their damaged or destroyed houses.

In order to finance the production and dissemination, information was treated as a capacity-building function, and could thus be funded through the donors' capacity-building budgets for the program.

Various organisations had prepared public information materials on safer building construction techniques. In order to reduce confusion among earthquake victims ERRA encouraged agencies to stop the production and dissemination of such materials and to wait for the official ERRA "Housing Reconstruction Checklist" which was under preparation UN-HABITAT with the technical support of NSET. By early October 30,000 checklists in poster form and 10,000 as booklets had been distributed through all HRCs, POs Information Assistants and the Army.

D. Beneficiary Eligibility/Selection

WHY ► The Housing Reconstruction Programme is aimed at addressing the needs of those affected by a disaster, and therefore, they are the prime beneficiaries of the programme, though there will inevitably be many other beneficiaries who will directly and indirectly benefit from the programme, if nothing else because of the improvements to infrastructure and services that will be made to the area as a whole. There will be a number of others, in the region and outside, who will benefit indirectly because they will be supplying the goods and services that will be used in the reconstruction process.

While a reconstruction programme can, and should consider the indirect impact, for example by choosing those alternative materials and sources that are likely to be available locally rather than having to be imported, such considerations are likely to be secondary. The primary concern will usually be to meet the needs of those affected by the disaster, and these will become the primary beneficiaries. Therefore, it is important that these are clearly defined so that they and their needs can be identified and addressed.

As has been suggested above, this will be one of the considerations of and addressed by, first the outline and then the reconstruction strategy itself. Here we are concerned with identifying and, if necessary, selecting the beneficiaries, as part of the reconstruction policy. This will help ensure that the policy addresses the appropriate needs and that the assistance goes to and reaches the right beneficiaries: those for whom it is intended.



WHAT ► Beneficiary selection/identification involves a categorisation in the disaster-affected areas between those who are entitled to receive assistance to reconstruct their housing and those who are not. The primary basis for this distinction is likely to be whether or not their house has been damaged. It is likely that the reconstruction policy will have set different levels of assistance or entitlements, related to the level or extent of damage.

The task is complicated by the need to have transparent and easily understood definitions of what constitutes a house in this context, and who should be the recipient of the assistance. In terms of “house”, should a distinction be made between the size, quality and cost of the structure? This can be resolved by reference to the policy: if the policy is to “compensate” for loss, then an assessment needs to be made and each house categorised accordingly. However, if the policy is one of providing “assistance” with reconstruction, then the actual loss is less relevant, and perhaps houses only need to be classified as damaged or destroyed. Ironically, providing equal assistance regardless of the amount of loss may not be as “unfair” as it might seem, but is actually more “progressive” if we assume that those who had smaller or lower-value houses were poorer than those with large or more expensive houses. The latter are therefore likely to have access to more resources to reconstruct, and may be argued to need less assistance than the poorer households.

As far as identifying the recipient of the assistance is concerned, it would seem that the household residing in the structure should be the logical choice. However, in many cases, the household might be a tenant, or may have built the house on someone else’s land (which makes the structure the property of the landowner). In Pakistan, it is fairly common to find that a “house” is occupied by a “joint-family”, made up of siblings or between parent and sons, and they might argue that though one structure, it housed more than one family, each of which should be separately assisted.

The same reasoning could be applied here as with valuing property, and the policy might be to assist the reconstruction of each house, not each household. The fair versus progressive logic also applies. The more complicated issues are to do with ownership and legality. Should tenants be assisted or landlords? If the latter, would they be compelled to re-house their former tenants? And should there be the same assistance provided if the house was illegally built, or by squatters? These are questions for the reconstruction policy to decide and for the beneficiary identification to apply.

After the 2005 earthquake, a structure was considered to be a house if it fulfilled the following:

- Had a minimum covered area of 400 sq ft
- Was affected by the earthquake of October 8th 2005
- Was solely used for residential purposes before the earthquake
- All families living under one roof will be considered to be living in one house.

Once the data has been collected, it will need to be managed: it will need to be analysed to provide a geographic listing of all beneficiaries. In Pakistan this is probably best done by using the administrative divisions such as the District, Tehsil, Union Council or even Mauza. Linking this to the detailed information via GIS will help in monitoring the reconstruction process. The data will also have to be collated and grouped by type of damage and therefore of assistance the household is eligible for. With the rapid inflow of large amounts of data, electronic processing and management has to be considered, and should be designed from the start of the assessment process.

WHEN ► The identification and selection of beneficiaries should be done as part of the damage-assessment using the same set of survey forms and surveyors to minimise costs and logistic efficiency. As suggested above, the definitions for house and beneficiary and their relevant categories will emanate from the reconstruction policy, therefore this stage will have to wait for the policy to be formulated.

While it is important that the assessment be made sooner rather than later, it is also important that it is done properly – with transparency and accuracy, to minimise claims from households who feel they may have been omitted, or wrongly assessed, or that others have been unfairly assessed.

HOW ► Being part of the damage assessment process, the data required for beneficiary identification and selection is included in the assessment forms. To ensure that the process is transparent, it is advantageous to involve appropriate local persons in the assessment team, and it is also worth having a household representative on hand, not merely to provide information, but also to confirm and verify the record of the assessing team.

Copies of documents and photographs provide useful and less-challengeable evidence that can support the written record, specially any made on the basis of visual evidence.

Guiding Principles for the 2005 earthquake

- The cash grant was a provision of subsidy rather than replacement of loss
- The subsidy was meant for a core house, and not a complete housing unit
- The huge investment being made as a cash grant was secured through being disbursed in tranches after certification by the inspection teams.
- The disbursement was done directly to the beneficiary, using transparent banking channels without the use of any intermediary or middle men
- There was a mechanism in place for tracking the funds up to the point they were credited to the beneficiaries’ accounts
- There should be documentation of the economy – and the introduction of the banking/saving culture among the people

WHO ► A team (of 2 to 4 persons), at least one of who should have local knowledge and be familiar with the beneficiaries’ circumstances, should carry out the identification and selection survey. The team should be responsible the Agency executing the reconstruction policy, though the team members are likely to include inputs from other agencies, NGOs or local community members. In a large disaster, a number of teams will be required, and therefore their composition should take into account the capacity and capability of locally available staff. With more teams, the task could be completed faster, but finding and managing them may be a problem. The task should be kept manageable by ensuring there is sufficient training, including pilot surveys and spot checks.

E. Reconstruction Approaches



WHY ► The design of the reconstruction will depend on a number of circumstances – including both the nature of the disaster and the damage; the households affected; and the general approach and policy of the government. Nevertheless, there are some general principles that can be used to classify the range of different approaches. By identifying and selecting one of

these, the general direction and thrust of the policy becomes easier to understand and therefore to maintain consistency when these are elaborated.

WHAT ► The essential policy choices relate to

- **who decides:** (owners, community or Government agency), about the details and the timing;
- **what is provided:** whether the assistance is given simply in cash or is accompanied by technical guidelines; and
- **where is the reconstruction:** on or near the same location or on a new relocation site.

Alternative Policy Approaches

1. **Cash Approach:**
Unconditional financial assistance is given without technical support.
2. **Owner-Driven Reconstruction:**
Conditional financial assistance is given, accompanied by regulations and technical support aimed at ensuring that houses are built back better.
3. **Community-Driven Reconstruction:**
Financial and/or material assistance is channeled through community organizations that are actively involved in decision-making and in managing reconstruction.
4. **Agency-Driven Reconstruction in-Situ:**
Refers to an approach in which a governmental or nongovernmental agency hires a construction company to replace damaged houses in their pre-disaster location.
5. **Agency-Driven Reconstruction in Relocated Site:**
Refers to an approach in which a governmental or nongovernmental agency hires a construction company to build new houses on a new site.

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There are a number of permutations possible within these broad choices, and the box below shows 5 alternative approaches. As we move down the list of approaches, the degree of control of the households decreases and that of the implementing agency increases. In situations where the essential factor had been the technical unsuitability of house construction, the greater control by the agency is more likely to ensure compliance than if the reconstruction is left to the households.

On the other hand, if the households are taking the lead, they can better respond to their individual household needs than an agency that must perforce work with a limited range of design and other options. From an agency point of view, the household option is simpler, in that its role ends with the transfer of funds. Nevertheless, the agency would still be held responsible if there is a future disaster that the reconstructed houses cannot withstand.

In general, governments are likely to chose either the first or the last option – on the grounds of either minimising their own role and responsibility (which may work if the scale of disaster is small) or to retain control of as much of the process as possible. The latter is likely to prove the most costly, least efficient and least effective, as it is likely to take much longer than any of the other options and will almost certainly lead to a disruption of peoples’ lives and livelihoods, perhaps more than the original disaster itself.

Most expert opinion would suggest adopting the second, “owner-drive approach” as being the best for both the community, and ultimately the government.

| Reconstruction approach | Degree of household control | Form of assistance | | Role of actors | | | Location | |
|--|-----------------------------|--|--|------------------------------------|--------------------------------|--------------------|----------|----------|
| | | Financial | Technical | Community | Agency | Contractor | In-situ | New site |
| Cash Approach | Very high | Cash only | None | None | None | Household may hire | Yes | No |
| Owner-Driven Reconstruction | High | Conditional cash transfer to household | TA/Training of household | None | Project oversight and training | Household may hire | Yes | No |
| Community-Driven Reconstruction | Medium to high | Transfer to household or community | TA/Training of community and household | Project organization and oversight | Project oversight and training | Community may hire | Yes | No |
| Agency-Driven Reconstruction in-Situ | Low to medium | Funds handled by agency | Limited or none | Limited | Management of project | Agency hires | Yes | No |
| Agency-Driven Reconstruction in Relocated Site | Low | Funds handled by agency | Limited or none | Limited | Management of project | Agency hires | No | Yes |

WHEN ► Since the choice of approach will be fundamental in setting out the details of the policy, it will have to be decided very early on, ideally as part of the initial, outline policy stage.

HOW ► Since this is a matter of policy approach, it is a question of developing consensus between the government and the lead agencies and working towards the early adoption of a common policy approach.

Recommendations

1. When reconstruction is simple and mainly entails repair of damaged housing that is otherwise adequate, adopt CA; otherwise, whenever possible, adopt ODR.
2. Use CDR when community life and the local economy is disrupted by the disaster or relocation is required, or both.
3. Avoid ADRIS in rural areas and in places where the built environment and natural habitat are significantly intact.
4. If ADRRS is absolutely necessary, government should require community participation and establish simultaneous audit and oversight mechanisms.
5. Help communities rebuild their houses with facilitation and other appropriate enabling mechanisms identified through a social assessment that focuses on vulnerable households.
6. Ensure that reconstruction agencies take into consideration people’s different housing needs, vulnerabilities, livelihoods, and family size in selecting reconstruction approaches and that socioeconomic factors and gender-related requirements are addressed.
7. Under every approach, ensure that construction methods embody good planning, risk reduction, and environmental principles
8. Require community participation in all aspects of the process even when outside agencies or the private sector are in the lead.

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After the 2005 earthquake, the decision was made to adopt an owner-driven approach (see below)...

WHO ► The lead should be taken by the Disaster Reconstruction Agency who should consult with the community and other stakeholders in developing the appropriate form and details of the owner-driven approach and what assistance is needed to assist and facilitate its implementation.

F. Transitional Shelter

WHY ► In the immediate aftermath of a disaster there is a need for providing shelter on an emergency basis as part of the relief and recovery process. This is especially the case if the disaster has occurred at a time and place that has left the population at risk from and subject to severe or inclement weather conditions. Such temporary shelter to meet emergency needs are usually provided in the form of tents or simple prefabricated structures.

In most cases, it quickly becomes apparent that the longer-term shelter needs will not be able to be met within as short a time frame as might be desirable. This raises the question of how the gap might be filled between the emergency shelter and the permanent housing and very often the response is to consider providing some form of transitional shelter.

WHAT ► Transitional Shelter is something that is an in-between or stop-gap measure, and consists of a structure that is more robust, larger and longer-lasting than emergency shelter but is expected to be replaced fairly soon by permanent housing.

Like emergency shelter, transition shelters have to be capable of being erected quickly, without the extensive use of ground preparations. They need to be transportable and therefore lightweight, and have to be capable of being erected without the need for specialist labour or machinery.

By definition, the use of transitional shelter means the introduction of another component or step in the reconstruction process, and one that will likely add to the overall costs. Apart from the actual costs of the shelter itself (which may be substantial), there will be the need to find a location to construct these (without disturbing either the emergency shelter, or pre-empting the space where the permanent housing will be). Furthermore the additional sites will also need to be provided with at least basic, communal infrastructure. Finally, by taking away the some of the immediate need for permanent housing, temporary shelter may allow for a relaxation of the reconstruction effort. Wherever possible, therefore, transitional shelter should be avoided.

WHEN ► Where circumstances such as access, weather, availability of materials etc are such that there is likely to be more than 6 months – or the introduction and onset of severe weather that the emergency shelter cannot cope with, is imminent, temporary shelter may have to be resorted to.

HOW ► Where there is no other alternative but to consider temporary shelter, every attempt must be made to ensure that the temporary shelter is capable of being incorporated into the permanent housing. This can be done by extending or modifying the unit so that it becomes an integral part of the permanent housing solution, or, if that is not possible, then as many as possible of the components can be re-used or redeployed in the permanent house.

This means giving careful thought to both the design and construction of the temporary shelter and to its location.

After the 2005 earthquake the appreciation and awareness of the very severe conditions in the affected areas, especially during the winter, and the fact that permanent shelter could not be made available immediately to all those affected, led to the need for transitional shelter. This demand came not just from the affected households but also from the many national and international donors. As a result, apart from tents and other shelter provided immediately after the earthquake, there was subsequent provision of prefabricated shelter units. Ironically, in some instances the transitional shelter units arrived well after the permanent shelter had already been constructed.

WHO ► The policy lead should come from the Disaster Reconstruction Agency who should use inputs from all stakeholders to determine whether and what the need for transitional shelter is as well as ensuring that if it has to be provided, it is done taking the permanent shelter needs and programme into account.



G. Assistance Packages – Financial, Physical, Support

WHY ► A major part of the reconstruction process is the design and delivery of an assistance package of financial, physical and technical support to those affected by the disaster. Therefore the clear articulation of what the package is and how it will be made available to various households is a crucial component, not just for the affected households but also to those assisting in the process by administering and managing it or providing funds or other material and logistic support.

WHAT ► Depending upon the approach being taken (see above), the major part of the package is likely to consist of financial assistance, either in the form of cash or in kind – in the form of building materials perhaps.

Again, depending upon the approach adopted, this could be in the form of “compensation” that is meant to equate to, or at least reflect the actual loss suffered by each household, or as “assistance” meant to supplement the resources of the household and help it to reconstruct its housing. The package may be the same for all households, providing the same amount of financial assistance uniformly, regardless of damage or circumstances. However, it is the more likely that there will be some variation, especially if a large number of people are affected.

However, more than the actual amounts of money, it is critical that there be a rationale for the differences, and one that is transparent and easily understood

It is also very likely that the financial package will be accompanied by technical and perhaps physical assistance too. This is especially likely to be required where the pre-existing building materials and techniques have proven inadequate for the task of withstanding calamitous events. In order to ensure that the reconstruction does not merely replace like-for-like but does so in ways that are better and therefore improves housing and living conditions.

When using an approach that is owner-driven, the technical assistance and advice should not be in the form of rules and regulations that deny any choice to the households in what they build. Wherever possible, they should be suggestive of minimum or maximum standards, and the focus should be on improving the technology and skills of the construction workforce.

Wherever possible, “compliance” should be used as a basis for providing further assistance that should be provided in the form of facilitation rather than an inspection regime.

WHAT ► Funds Required and the Amount of Subsidy per House Following the 2005 Earthquake

ERRA comprehensive damage assessment exercise established the need for the funds that were to be disbursed for each affected house. The amount of subsidy to be given for the people was based on the level of poverty prevalent in the area, which was done by the government of Pakistan in consultation with the World Bank, the first lead donor for the housing program.

A few of the other important factors of cost: of construction material at the site of reconstruction and labour cost were not kept in mind and it was decided to consider the then-prevalent economic condition as being constant during the life of the program with no cushion in strategy to deal with changes in the costs. It in a way prompted ERRA later to give people more design options that could be reconstructed in the given amount of subsidy.

3. Reconstruction Planning

A. Land Use and Physical Planning

WHY ► Land is a valuable and limited resource. Productive land, used for agriculture, is even more so. All human activities require land, and with increasing populations, there is an increasing demand for land to locate housing, schools, health centres and other public and private facilities, commercial and employment generating activities etc. Furthermore, these need to be provided with access, electricity, water, sewerage, drainage and other infrastructure that are expensive to produce. These in turn increase the attraction and value of the land they service.

If land is used, serviced or developed without considering its implications for other parcels or purely on the basis of individual benefit and ignoring larger, societal considerations, it could increase costs – real and imputed, for the whole community. To minimise costs and improve efficiency, the use of land, now and in the future, needs to be managed through some form of land-use and physical planning.

WHAT ► Land-use planning is the process of designating absolute, preferred, restricted or barred uses to specific areas of land within a given jurisdiction.

The absolute designation indicates what that specific land area must be used for, and be any land use, from residential to commercial to being reserved for future use; the preferred or restricted designation indicates those uses that are equally permissible, on the specified land areas; while the restricted or barred designation indicates the uses that the specified land may not be put to.

Conventional land-use plans tend to be based on designating absolute uses. While this makes it easier to control future use and development, the rigidity of such an approach is very restricting and is susceptible to errors since future demands for land-use may not match those assumed by the plan. Moreover, where the land is largely in private ownership, the ability to ensure compliance may be continuously challenged, and gradually erode the authority of the plan. Moreover, landowners may not be willing to undertake the designated development, waiting for a future change in the plan, thereby leaving land undeveloped, leading to inefficiencies and encouraging speculative land holding. Such an approach may be better suited to areas undergoing rapid development where there are pressures for planning permission to be readily forthcoming, and a need for controlling development.

Currently, the more commonly accepted approach is to use barred or restricted designations, leaving the actual choice of land use to owners and developers. In most cases, development can be better managed through a judicious use of land-use plans combined with physical planning and the provision of services and infrastructure to stimulate development. This approach is likely to result in more efficient development of land, but requires a greater capability and capacity with the planning authority.

As distinct from urban areas, rural areas are unlikely to need the sort of conventional rigid approach to land-use planning, except perhaps for areas in and around settlements. On the other hand, land-use planning can be a very useful tool for communities to develop a better understanding of their area and develop more sustainable approaches to development.

With the use of community-based and participatory processes and techniques, land-use planning can also be used as a very powerful tool for increasing community awareness about sustainability, and the environment as well as an increased sense of ownership of their area.

WHEN ► Disasters present a natural opportunity for people to think about the place they live in, and to encourage the use of reconstruction as a means of taking greater control of their environment in ways that are more socially responsive and environmentally sensitive.

The more extensive the damage, the greater the opportunity that will be created for the



introduction of appropriate land-use planning and management plans and mechanisms. The longer it is put off, the more difficult it will be to produce an optimal plan for the future development of the area since it is likely that at least some households will start reconstructing their houses almost immediately after the disaster event. It will be very difficult to persuade these households to backtrack on these investments in favour of the social good.

Land-use Planning is more likely to be required in cases where there has been widespread damage; where the damage has been due to poor location choices; where access and communication routes have been disrupted; where there is a high risk of a similar disaster occurring in the future; where there has been a loss of land due to slides and flooding leading to relocation for some or all members of the community; or where the community intends to radically improve upon its development options.

HOW ► Except for a few exceptional cases, rural areas do not have land-use or physical plans. Although the legislation exists to require the development of a plan, there is little or no capacity to do so, and has never been encouraged by any of the responsible agencies or by the community – most of who remain unaware of the advantages and uses of planning.

The post-disaster situation provides an opportunity to initiate the process, but given the available resources and capacities, it would be irresponsible to embark on a full-fledged planning process. Nevertheless, even a rough-and-ready approach can help build community awareness and improve their understanding of sustainability and environmental issues as well as increasing ownership of the place where they live and work.

A 2-person team (of a planner and a sociologist) from the lead agency will work with the local Patwari and representatives of the local community. They will use a large map of the area (probably based on available satellite imagery) and indicate on it:

1. Main physical features: rivers, streams, valleys, peaks;
2. Main physical infrastructure: roads, bridges, electricity lines, gas, water;
3. Social infrastructure: schools, health buildings, government and institutional buildings;
4. Settlements, hamlets and outlying homesteads;
5. Major land holdings: private, common (shaamlaat) and government;
6. Areas barred from development: steep slopes and slides, rock outcrops, forests, water bodies and water sheds, agriculturally valuable land, etc
7. Areas available for development: land adjacent to existing development, barren (banjar) land, etc
8. Physical infrastructure needed: access roads (new and improved), bridges and culverts, water storage, protected watersheds, protected forests, new housing areas, new and improved facilities, etc.

The map should be displayed on an appropriate wall (in the Local Government Office, school or even General store) for a week and a meeting held to present it to the community. It would be better to hold two meetings, so that women can attend one.



At the meeting agreement should be sought for the accuracy and appropriateness of the existing land-uses as well as the proposed use zones. Modifications should be made as appropriate. The Lead Agency team will then digitise the map and provide copies (hard and soft) for GIS. The community would have a copy for reference and future use, and eventual upgrading.

WHO ► At the wider level, land-use and physical planning requires a series of actions by various agencies and actors. These are indicated in the box below:

RECOMMENDATIONS FOR LAND_USE AND PHYSICAL PLANNING

1. The lead disaster agency should decide with local government, immediately after the disaster, how they will share responsibility and coordinate aspects of reconstruction related to local planning and land use, including decisions on land use changes and relocation. They should also decide whether technical assistance will be needed at the local level.
2. The lead disaster agency should determine how geographic, satellite photography, and other data useful for land use planning will be shared with and among all agencies involved in reconstruction, to save costs and improve planning outcomes. See
3. Local government should decide immediately whether its existing land use plans, regulations, and building codes are sufficient to manage the recovery and reconstruction or to what extent they need to be modified. Building code revision, if required, is time-consuming and needs to start immediately.
4. Agencies involved in reconstruction should establish a joint timeline for reconstruction early on that allows enough time for planning without impeding the reconstruction process, and should agree on a communications strategy with the public regarding land use issues. See
5. Local government should participate in assessments or initiate studies to determine how existing land uses and construction technologies contributed to disaster impacts and to determine how regulations should be modified to reduce future disaster risk.
6. Agencies involved in reconstruction, local government, and land administration agencies should collectively decide during assessment whether relocation will be part of the reconstruction process, and whether land tenure issues will need to be addressed, so that preparation for these activities can begin immediately, due to their long lead time.
7. Local government should determine how it will manage (1) plan review and approval, (2) issuance of building permits, (3) contractor training, and (4) construction inspection. Local government should also determine whether local capacity and institutions are adequate to ensure safe rebuilding or what, if any, assistance will be needed.

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After the 2005 earthquake, the Rural Housing Reconstruction Programme included activities called 'village mapping' under the terms of reference of village reconstruction committees to be facilitated by partner organisations. The objective was to increase collective understanding of land use and sustainable development issues in the village, to increase understanding of hazards and to promote collective actions in mitigation and risk reduction, to support engagement with government departments and NGOs on the planning and implementation of infrastructure and community facilities. The extensive destruction in many villages meant that it was necessary to reconstruct entire markets, mosques, schools, and other facilities and consider the reduction of risk through better selection of sites or to consider growth or new needs.

However in the majority of cases land was in very short supply, alternative sites were rarely available or considered, and reconstruction took place on the same site as before. In the locations where schools were adjudged by geological and engineering survey to be inappropriate for construction of community facilities and key structures like schools or basic health units, it proved

extremely difficult to find alternatives for a number of reasons, technically there is limited flat safe land, economically, it is very difficult to purchase alternative land as owners are generally unwilling to sell, or they want extremely high prices for their land, socially, it is very difficult to get agreement in the community about relocation, including arguments over who benefits. The high costs demanded by owners was not always related to an issue of value, it was also related to the perceived opportunity of reconstruction budgets.

This serious issue might have been better resolved through a more technically based, transparent and participatory planning process instead of ad hoc sector wise with different stakeholder groups.

Community infrastructure rehabilitation and development such as link roads and water supply was more feasible for discussion through village mapping or in relation to physical planning, for example how many households would benefit from or contribute to various schemes. Mitigation works for hazardous lands were developed by AKDN based on cost benefit depending on how many households / houses would be protected by the measures.

Village mapping was used in Chak Hama by AKDN to assist the community to identify alternative land for those families who had completely lost their land in landslides as a result of the earthquake. The community came together to identify the options based on social networks and then were facilitated by geological experts to identify land based on safety.

B. Infrastructure and Services Delivery

WHY ► "Housing" requires that the individual houses have access to basic infrastructure such as water, electricity, sewerage and drainage. There are a number of ways in which these services can be delivered, ranging from centralised, reticulated systems to stand-alone provision. What is important is that all houses have access to an appropriate service.

Accordingly, there can be various service providers, ranging from centralised national authorities or private corporations to the community, small groups and the households themselves. Again, having a reliable service is more critical than who the service provider is.

After a disaster, much of the infrastructure is also likely to have been disrupted, damaged or destroyed and will need reconstruction. Unlike housing, for which there is individual demand, and many households will probably initiate reconstruction without waiting for assistance, the restoration or installation of services is likely to take much longer, especially if it is managed as a separate component.

WHAT ► Generally, it is assumed that water and sanitation (the disposal of solid and liquid wastes) are the minimum infrastructure services that need to be provided, followed closely by electricity and, for most parts of Pakistan, gas. There are minimum levels of performance for each of these to ensure that basic human needs, health and safety are assured.

As well as these "physical infrastructure" services, social or public services and facilities such as education, health, recreation and even public transport could be included as essential services to be made available as part of the reconstruction process.

What standards and levels are set will depend on what was available to the community before the disaster, and will also make reference to the general levels and availability of services in neighbouring areas. It is unlikely that despite the intention to "build back better", the affected communities are not likely to be able to justify getting a much higher level of service provision compared to the rest of the country.

After the 2005 earthquake, the Guiding Principles for Infrastructure and Service Delivery were:

- Infrastructure includes public and community sector as well as the infrastructure and services developed which are part of individual and group housing, such as water supply and sanitation.
- Infrastructure and services and their recovery will have an impact on housing reconstruction, for example affecting transport of materials.



- Clean water supply is needed for most construction technologies and shortages can affect the rate of building progress.
- There is an opportunity through reconstruction to build back better including not only seismic vulnerabilities but also improving household infrastructure and services, including capitalizing on changes in building design and technologies.
- Measures for improved infrastructure and services should follow the same principles as housing: affordability, appropriateness, sustainability.

WHEN ► Though the actual process of service provision may take longer than the housing reconstruction, its planning and even implementation will have to start at the same time. This is particularly true in situations where there is likely to be a re-siting of houses, and certainly in cases where relocation is being considered.

The location, and to some extent levels of service provision are dependent upon layouts and densities. Higher densities allow for greater efficiencies in service and infrastructure provision and for more centralised systems of provision. Dispersed or low-density housing and development is better served by stand-alone or small group, decentralised systems and in many cases, the services can be provided “on-plot”. These decisions have to be taken at the initial planning stages of policy formulation.

HOW ► How the infrastructure and services will be provided will depend very much on what level and standard of provision is envisaged and also on what was prevalent in the pre-disaster situation. Nevertheless, there are a number of ways of actually providing each level of service and that also depends on who will be responsible not just for the provision but also the supply and management of the systems.

The box below provides some general recommendations for infrastructure and service delivery.

Recommendations for Infrastructure and Service Delivery

1. Government should enforce measures to ensure that infrastructure planning and reconstruction is closely coordinated with housing reconstruction, using a broad definition of infrastructure to include community facilities.
2. From the first day, support local service providers, such as local government and the community, in the planning and implementation of infrastructure projects, or at a minimum involve them in these efforts.
3. Plan in advance for activities that require long lead times, especially land acquisition and public consultations.
4. Develop realistic reconstruction schedules and service delivery strategies that take into consideration the fact that infrastructure reconstruction can take much longer than housing reconstruction.
5. Apply the “build back better” principle to infrastructure reconstruction, both in terms of its resilience to hazards and its environmental sustainability.
6. Provide a reserve for material and labor cost increases, because these costs will grow in proportion to the speed of the reconstruction effort. A contingency of at least 20 percent is realistic.
7. Make generous provisions for project management and for construction management and quality control, recognizing that the post-disaster environment will be more complex and that there is a risk that the work will be of lower quality than in normal conditions.
8. Use local technical resources in infrastructure planning and design, risk reduction, and construction.
9. Plan and budget for the human capacity development needed for the infrastructure facilities.

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WHO ► It has been suggested above that there are various ways and many options for service provision – mainly dependent on what is desired and who will be responsible for it.

After the 2005 earthquake, ERRA’s planning and implementation programmes were developed sector wise with limited overlap or exchange between complimentary sectors, such as housing and infrastructure. The separation also led to some issues being lost in the gap between. While ERRA water and sanitation for example dealt with public and community sector works, private and household level wat-san was not covered by housing or by wat-san.

In some cases partner organisation were implementing parallel programmes in housing and water and sanitation in the same union councils. This provided some benefits in terms of rehabilitation and development of local water supply, supporting construction work and also general access to water and protection of ground water sources. However, the priority was public and community works. There was no development or promotion of rainwater harvesting for example at either community or household level. Similarly, programmes in sanitation were focused on education facilities, and basic health units, rather than household sanitation facilities or practices.

Road rehabilitation and development was generally left until a later stage in the recovery programme, and so did not benefit all of those transporting goods early. On the other hand, extensive road works at an early stage would have caused increased disruption and costs. Ideally key road works were needed immediately after the earthquake on an emergency and accelerated basis. However, it is important to remember that this is some of the most inhospitable terrain in the country for road construction and road maintenance, with land-sliding, snow and monsoon rain accelerating degradation

C. Environmental Planning

WHY ► Most disasters have an adverse impact on the environment – firstly because of the disaster event itself and secondly because of the reconstruction process. Disasters naturally damage ecosystems and impact heavily on natural physical features from water bodies to landforms. Reconstruction after disasters, especially if it involves relocation causes further damage to the environment if it is not properly managed.

The relocation, or consolidation of human settlements, including transitional shelters and camps, transform the natural; landscape, replacing ground cover and vegetation with concrete and impervious materials. New access roads and other infrastructure construction require the cutting and filling of large areas of land, and the construction of housing and other structures consumes a large quantity of material resources. A settlement that might have been built over decades, using small amounts of timber annually, may be rebuilt “overnight” using the same amount of resources without any chance of their replenishment.

To avoid this, and indeed to turn the disaster into an opportunity, environmental awareness and planning is needed as part of the reconstruction.

WHAT ► There are affectively two components to environmental planning after a disaster: one is to minimise and make good the damage caused by the disaster event itself and the other is to ensure that the reconstruction process is environmentally sustainable. This requires environmentally sensitive planning and layout of new settlements and structures; environmentally sensitive selection of materials and technologies; maximising reuse and recycle of building materials and safe and secure disposal of debris and wastes.

A third component, of environmental awareness raising, should also be included that focuses on the brown agenda (water and sanitation) and water conservation through managing water use and re-use and rainwater harvesting; increases environmentally friendly activities such as tree-planting and reverses erosion and deforestation; introduces fuel and energy efficiency appliances and processes; and generally promotes environmental education through formal and informal methods and messages.

After the 2005 earthquake the following Guiding Principles were adopted for environmental planning



- Rebuild in situ. Minimum population relocation should take place, and only where necessary and where risks or hazards are very high.
- Use of local materials promoted in construction standards and technical support.
- Use of salvage materials promoted in construction standards and technical support.
- The building life cycle should be considered in the evaluation of environmental impact.
- Rapid Environmental Impact Assessments were to be used as tools in decision-making.
- Rural housing reconstruction offers opportunities to improve environmental performance and sustainability as well as reducing seismic vulnerability.
- The recovery provided opportunities to link housing and settlement sustainability to natural resource management.

HOW ► ItAn environmental assessment and should be carried out as soon as possible after the disaster event and an environmental plan prepared at the same time and integrated with the reconstruction plan. Amongst other things, all proposals for reconstruction should be subjected to an environmental impact assessment. The box below provides further guidelines and recommendations for environmental planning.

Recommendations for Environmental Planning

1. Include government staff and consultants in the environmental assessment teams so that they acquire firsthand knowledge of environmental issues in the affected area and can identify how incentives for environmentally sustainable reconstruction can be incorporated in the reconstruction policy.
2. Identify the legal framework for environmental management to be applied in reconstruction early on, how it will be implemented and by whom, and how it will be monitored and evaluated.
3. Mobilize the post-disaster debris management effort immediately after the disaster, carrying out a rapid planning exercise if a debris management plan was not in place before the disaster.
4. Ensure that the environmental requirements for reconstruction are effectively and continually communicated to all agencies participating in the reconstruction program.
5. In developing the reconstruction policy, government, UN shelter cluster partners, and environmental organizations should work together to minimize the environmental impact and maximize the local sustainability of the building materials and practices to be used.
6. Use the environmental review process to evaluate the ecological footprint of a relocation site or in- situ reconstruction project and to select the site, develop mitigation measures for the project and its construction, and adjust project parameters.
7. Plan new settlements or the rehabilitation of existing systems so that sanitation and other basic infrastructure are provided as early as possible to ensure healthy environmental conditions for new residents.

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WHO ► The task of ensuring environmental measures are taken and applied lies ultimately with the Environmental Protection Agency at the national level and its equivalent or designated counterparts at the local. The actual task may be assigned to specialist consultants to manage, oversee or even undertake, in concert with the lead agency responsible for the reconstruction. More specific tasks and implementation strategies may also be designated to various local government institutions or NGOs.

At the time of the 2005 earthquake, institutionally, there was no previous designated government authority with responsibility either for rural housing standards and building control or for rural land use and planning control. The Department of Local Government and Rural Development is primarily concerned with administrative issues and public works including registration of births and deaths in the population and small-scale community infrastructure. There is no mandate to control or guide private development such as housing and limited capacity to address increasing development and population through strategic planning for infrastructure. In AJK and NWFP local representation, consultation or participation structures are nascent and do not support

engagement by communities in awareness activities, or in planning or decision-making.

While local water supply and quality is under the same local authority, other natural resource management such as forestry is under another authority. There is not an integrated approach to issues of settlement and natural resource management in Government or in the community. There is limited correlation of development of marginal land for settlement, rapid environmental degradation and increased vulnerability to disaster. Apart from concern for seismic risk, the increased incidents of land-slides and flash flooding have not resulted in settlement, development or planning control measures.

The initial response to the earthquake was generally focused on replacement of lost assets and seismic safety of construction. The earthquake was considered as an event due to plate tectonics and not related to any environmental considerations on the ground. The risk of landslides and flooding, with increasing prevalence due to environmental degradation, or risk due to the seismic hazard was a lesser concern in terms of risk mitigation and risk reduction.

The majority of communities in the affected areas, historically, had easy access to good quality and plentiful supplies of timber and potable water and were relatively unconcerned about the pressure of increased demand and decreasing resources or the increase in vulnerability to hazard. The responsibility for management of natural resources was perceived to be a public sector issue, rather than a shared responsibility, and there was neither confidence nor concern for the government's record in this regard. The general lack of awareness is reflected in the secondary status of environmental criteria in reconstruction decision-making and implementation.

After the 2005 earthquake, the later-stage promotions of environmental improvement measures including rainwater harvesting and plinth protection have been successful at individual household level. The promotion of sanitation has been partially successful, though there is limited awareness of or concern for contamination of ground water.

Standards promoted use of salvage materials and use of local materials reducing the environmental impact of transportation but still there was significant environmental impact of extraction and transportation.

Standards for reconstruction were more economical in terms of local materials than previous construction, particularly timber as well as more seismic resistant.

Later stage promotion of fuel-efficient heating and cooking and insulation was successfully adopted by households and significant reduction of timber consumption recorded.

D. Housing Design and Construction Technology

WHY ► Much of the damage and destruction in a natural disaster is evidenced by its impact on housing. Houses are the most common structure and therefore bound to be affected most, and especially in rural areas, most if not all housing has not been subjected to any building control or had the benefit of professional designers, or technical supervision, but have been built by traditional methods using traditional methods and techniques. While these are perfectly adequate on a day-to-day basis, their ability to withstand extreme events is limited. The trade-off between more robust and expensive construction and risk mitigation is not justified for most people, who have limited options in any case. Often, the standards and quality of construction has deteriorated and where there has also been climatic change, the structures may no longer be able to cope when the numbers and densities of housing has increased manifold.

WHAT ► After a disastrous event, there are naturally calls to improve the design and construction of houses, not only from donors and sympathisers but from the households themselves. As with other aspects, the reconstruction presents an opportunity to "build back better". As well as proposals for improved housing, using more efficient designs and introducing materials and technologies that are better able to withstand hazards without increasing costs beyond those affordable by the target populations, there is also a demand for the production of "prototype", "standard" or "acceptable" designs that would meet the eligibility criteria of the financial or other assistance being offered.



Prototype designs suggest that they may be the model on which acceptable designs could be based; standard designs suggest the only acceptable design; while acceptable designs suggest a range that would be equally acceptable. Different agencies might have a preference for one or the other. Standard designs, of one-type-fits all may perhaps be too restrictive, and therefore there may be three or four options on offer. The standard design is the easiest to manage and monitor, but in reality is likely to be the one-type-suits-none, and households are likely to immediately modify them to suit their needs, making this a wasteful solution. Prototypes may be difficult for households to develop satisfactorily and may lead to disputes. Having a range of acceptable designs provides a more effective and efficient solution.

Of course, the “design” may not necessarily be of the house, but of components, and may include guidelines for the design and construction of different elements of a house, including hazard and risk mitigation advisories.

At the time of the 2005 earthquake, apart from the physical challenges of reconstruction, there were several issues in institutional, economic and personnel capacities to address. As common in the majority of countries there was not a formal building code or institution responsible for planning or building enforcement for rural areas, and in the affected areas, there were no codes for seismic hazard nor effective systems of enforcement of the existing regulations. In Pakistan there were few experts on earthquake resistant construction and the subject was not mainstreamed in engineering or architectural education. Construction in traditional technologies had diminished in terms of quality and construction in new materials and technologies was poorly constructed due to poor levels of knowledge and poor execution. The existing infrastructure of technical or vocational training for artisans was small and not appropriate to engage with the largely informal sector and apprentice system that characterized the housing construction sector.

The requirement therefore was not only to devise adequate and appropriate technical solutions in terms of house designs and specifications in construction technologies, but also to relate to and resolve issues of capacity, skills, quality assurance and building control to execute those solutions.

WHEN ► The primary responsibility for setting the standards and options for house design, construction and technology is with the lead agency, using their own staff, or more likely calling in appropriate and relevant advice and expertise. The proposals should be discussed and debated at stakeholder meetings, and if at all possible, field-tested using real conditions before being finalised. Even so, allowance should be made for further modifications on the basis of feedback, including the very real possibility of households and builders taking up the challenge and making innovative improvements to the original design and technologies.

An equally important component is to have available the information and communication apparatus to broadcast and publicise the designs and technologies, and to have in place a capacity and capability building training and skill-upgrading programme

After the 2005 earthquake, the principles adopted for Housing Design and Construction included:

Build Back Better

The ERRA policy decision that reconstruction would be based on the principle on ‘build back better’ across all sectors set a premise that needed to be further defined according to sectoral strategies. In the Rural Housing Reconstruction Strategy March 2006: ‘The overall objective of the rural housing reconstruction policy is to ensure that an estimated 400,000 houses that were either destroyed or damaged, will be rebuilt by using earthquake resistant building techniques, through grant assistance from the Government to eligible households’.

The definition of ‘build back better’ emphasizes improved earthquake resistance but did not explicitly mention other requirements in terms of standards or performance criteria. The strategy mentions ‘Reconstruction efforts will consider environmental degradation concerns, support environmental friendly building techniques and promote sustainability awareness’. There is not specific or explicit reference to set or enforce standards on water and sanitation, energy efficiency or other criteria.

Financial Assistance

The decision to provide financial assistance of 175,000 PKR for a core house of 250-400 sq.ft,

(basically for a 2 room house), was based on calculation of masonry with sand cement mortar and steel reinforcement. While the financial assistance was not compensation based and was planned to adhere to the policy principle of equity, in effect the financial assistance depreciated rapidly due to inflation, and devaluation of the Pakistan Rupee during the course of the programme, and households faced very different costs for reconstruction due to wide variations in material and labour costs and particularly high transportation costs in remote areas. ERRA had to ensure there were approved seismic resistant designs and construction technologies that were feasible to construct within the financial assistance budget.

Sustainable Housing

The emphasis in the initial phases of the programme was on strictly only on safer construction. Opportunities to address environmental performance, including for example rainwater harvesting were deemed unnecessary by ERRA and certain donors. Therefore when the programme was a full capacity of implementing partner organizations, there was no information available to promote improvements in these aspects of housing. By mid 2009 when the rate of housing completion and compliance assured decision makers that the housing programme had met targets including financial disbursement, activities were started to redress building performance issues. This includes the development and promotion of technical advice for rainwater harvesting, water filtration, low and mid cost sanitation, insulation, fuel efficient heating and cooking. The uptake of building improvement measures has been very positive and a greater impact might have been achieved had the information been integrated earlier in the programme.

WHO ► The Box below gives some recommendations regarding the responsibilities and tasks in the development of house designs and construction technologies (HDCT)

Recommendations for House Design and Construction Technology

1. The lead disaster agency should select and engage a multidisciplinary team of experts, which may include experts from outside the country, to analyze the disaster impact on common HDCTs and help select the HDCTs to be used in reconstruction.
2. The lead disaster agency, having decided on HDCTs for reconstruction, must ensure that they are fully integrated into the reconstruction policy, including the housing financial assistance scheme, and must determine how to ensure that the norms and standards are uniform across the disaster area.
3. The lead disaster agency must decide the conditions under which repairing or retrofitting will be promoted as an alternative to full reconstruction.
4. The lead disaster agency should decide on and implement a range of mechanisms to fully involve local governments, local communities and the building industry in decision making regarding HDCTs and in implementation of reconstruction.
5. Agencies involved in reconstruction should decide how to conform to the HDCT standards set by the lead disaster agency, including those for repairing and retrofitting of partially damaged houses, if it is agreed that they are appropriate approaches.
6. Agencies involved in reconstruction should decide jointly how the choice of HDCTs affects the need for training and should cooperate to ensure that quality training is available.
7. Agencies involved in reconstruction should decide, while planning their programs, how to lower the environmental impact of reconstruction.
8. Agencies involved in reconstruction should decide how to manage the impact of design and technology on building materials market, if necessary.

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E. Cultural Heritage Conservation

WHY ► After a disaster there is usually pressure to reconstruct the houses destroyed or damaged by the disaster using “modern” materials and technologies – not only because it thought that will produce greater risk reduction, but also because it will be faster, and where external agencies are involved, it will use techniques and methods that those providing assistance are more familiar with. Indeed, in many parts of the world, indigenous technologies are looked down upon as being second-best, and those that are familiar and competent in its use are decreasing.

Unless explicit action is taken to support and promote the use of indigenous technologies, the disaster reconstruction programme could signal the beginning of the end for traditional construction. In most cases, public buildings – whether schools or health facilities or government offices, commercial buildings, already make use of modern technologies and designs exclusively.

Traditional housing construction is not merely a more harmonious and responsive technology, it may also be more environmentally friendly, and properly used, be more affordable and more effective in reducing risks. More than that, indigenous housing is a living embodiment of a culture and tradition that is a repository of the evolved wisdom and experience of generations. It is an essential component of what defines culture, and should not be allowed to disappear and disintegrate.

While there are many who might be willing to support the preservation and conservation of iconic structures and monuments and landmark structures, there is usually no similar sentiment or support for traditional housing and construction, and yet, without it, the monuments will quickly lose their context, that which defines and tethers the monuments to the place and to the people that live there.

WHAT ► The development of a conservation strategy for the protection and preservation of cultural monuments and other important structures is, correctly, the focus of a specialist cultural conservation plan. Ideally, such a plan should have been drawn and be in place before the disaster event, but if not, should be put in place immediately following the disaster by the specialised agency responsible.

As an integral component of the cultural heritage, traditional housing and construction should also be the subject of protection and promotion strategies as part of the reconstruction effort.

After the 2005 earthquake, the ERRA housing reconstruction policy foresaw the need to accommodate variety across the very different geographical and cultural contexts of the earthquake affected areas. This was referred to as ‘local uniqueness’ rather than one size fits all. The policy further promoted ‘locally known construction technology’ ‘support environmental friendly building techniques and sustainability awareness’ and ‘reconstructing only where necessary’. The policy did not set out to provide additional or specific support to areas of cultural significance, or conservation, but provided a policy context which could support the use of local and traditional technologies, resulting in focused interest at technical advisory level and regeneration of traditional housing architecture and technologies at field level. Within this context, increased awareness of the value of vernacular housing led to the identification of areas and buildings of particular cultural significance and to associated programme actions.

HOW ► Housing is not usually valued as cultural heritage in the same way as historic monuments. Housing is in private ownership and not necessarily associated with historic events or famous people, but housing in patterns of settlement and construction may comprise architecturally and culturally valuable assets, preserving history, continuity and a sense of identity and place. Both individual buildings and settlement patterns may be adversely affected by inappropriate rehabilitation or reconstruction.

Documentation:

Vernacular housing is often not well documented, the increased technical capacities and focus after disaster may provide useful opportunities for documentation and analysis as well as providing a platform to safeguard or promote the information in the technical community.



After the 2005 earthquake, an informal network of technical expertise was initiated to exchange information, with the objective of supporting the development of guidelines to support the endorsement of appropriate construction. Although conservation networks already exist, like ICOMOS, there was not a formal process and input from formal networks did not happen, but linkages were developed with academics, academic institutions, private practitioners providing both valuable input, peer review, discussion and dissemination of resource material and programme experience.

WHO ► The lead agency should seek the necessary technical advice to ensure that its housing reconstruction policy supports and promotes traditional housing and construction. The box below gives recommendations for how this could be done.

Recommendations for Cultural and Heritage Conservation

1. Immediately after a disaster, should mobilize the heritage conservation, if one is already designated, or if not, appoint one to address damage to resources of national significance and to assist local communities.
2. The lead agency for heritage conservation should collaborate with the lead disaster agency and local governments to ensure cultural resources are considered in post-disaster damage and loss assessments.
3. Communities in collaboration with local government and the lead agency for heritage conservation should identify and prioritize cultural resources that require conservation during recovery and reconstruction and document the condition of these resources.
4. Communities, in collaboration with local government and the lead agency for heritage conservation, should decide whether adequate instruments or plans are in place to address post-disaster cultural heritage risks. If so, they should be activated. If not, stakeholders should work together to carry out the cultural heritage planning.
5. The lead agency for heritage conservation should decide whether available local resources are adequate to address the post-disaster cultural heritage risks that have been identified. If not, it should identify and mobilize outside financial and technical assistance.
6. Religious, tribal organizations, and other guardians of cultural resources should ensure that their resources are included in post-disaster assessments and should request assistance in conserving them, if required.
7. Communities being relocated and receiving communities should demand that the conservation of cultural resources be a consideration in resettlement planning, site selection and relocation plans.

Safer Homes, Stronger Communities: A Handbook for Reconstructing after Natural Disasters

4. Project Implementation

A. Institutional Options for Reconstruction Management

WHY ► One of the consequences of disasters is that they disrupt the normal work and effectiveness of organisations, including that of government and administration. Ironically, this is the very time when having a well organised and operating management system is most needed to administer and oversee the relief and recovery efforts. The larger and more widespread the disaster, the more likely and the greater the disruption and the more urgent will be the need to have in place an effective system of reconstruction management.

However, the management of the reconstruction effort is likely to require additional tasks to be undertaken, and in ways that are not necessarily going to be the same as the normal processes of government and public administration. Therefore, purely relying on the normal government institutions to take on the reconstruction management task is probably not the most effective option. Rather than adding these tasks to what is likely to be an already overstretched management system, it would be more efficient to see these are circumscribed tasks that could be more effectively performed by an organisation specifically designed for it.

WHAT ► Perhaps the most important institutional requirement is to have an identified and acknowledged institutional mechanism in place as quickly as possible, with clearly identified roles and responsibilities with the mandate and resources necessary for these to be carried out.

Perhaps as important as having a clearly identified mechanism is to have clearly articulated and understood boundaries and complementarities between the disaster reconstruction organisation and the regular government agencies.

The disaster reconstruction management institution may be a single unified agency tasked with policy formulation and implementation or an integrated set of agencies with those with oversight and managerial functions overseeing and monitoring implementing institutions. Similarly, given the federal structure of the country, the institutional setup would have to recognise and take into account the federal and provincial needs and have a clear articulation between the different levels.

Pakistan Context

At the time of the earthquake in 2005, Pakistan did not have a disaster management authority. There was no dedicated institutional structure mandated to respond to disasters or to plan or manage recovery and reconstruction. Pakistan had previously experienced frequent small-scale disasters, but not a massive event on the scale of 2005 in terms of damage, losses, responses, actors or budgets.

Recent disaster experience in South Asia including the 2001 Gujarat earthquake and 2004 Indian Ocean Tsunami showed the importance of coordination of relief, strong policy development for reconstruction, and robust resource mobilisation and management.

The scale of the earthquake pointed to the need for Pakistan to quickly establish an appropriate Government arrangement, to ensure coherence of the Government response. This required firstly political support and autonomy.

Secondly, it required coordination and cooperation by participating Government actors: including

- a) civil and military,
- b) federal and provincial / local,
- c) line departments and technical institutions.

From this platform the Government could marshal their own resources and capacities and manage the range of national and international assistance and support potentially available.

WHEN ► As with other aspects of the reconstruction, it is best to have the structure and legal frameworks in place before a disaster, so that the machinery can be mobilised rapidly and be in



place by the time it is needed with the minimum of delay and therefore minimum of confusion.

Since most of the personnel are likely to be drawn from other government and perhaps even private organisations, it is unlikely that the whole of the institution would be expected to be functioning in anticipation of a disaster. Therefore, it is most likely that ordinarily, only a small high level Secretariat would be operational, tasked with regular reviews and readiness procedures tested and in place.

HOW ► While it would be perfectly possible to have the disaster reconstruction institution set up as a private or non-government institution, the nature of the tasks and the powers that would have to be allocated to it, require that this be a government organisation. The fact that it would most likely have to work alongside civil and military departments also suggests that a government agency would be more suitable.

However, it is equally inevitable, that the actual implementation would require the involvement of private sector, community and even international organisations and institutions, and their role and potential contribution should be anticipated, accommodated and facilitated. This will require having a pre-designed set of standard operating procedures in place.

Recommendations for Institutional Mechanisms

1. Define reconstruction policies and institutional mechanisms before disaster strikes.
2. If the demands of the disaster go beyond government capacity, establish a dedicated organization to manage disaster recovery.
3. Wherever possible, administer reconstruction using existing ministries and/or municipal departments and their existing staff, or at a minimum, provide them a central role.
4. Equip both the lead reconstruction agency and the local agencies charged with housing reconstruction with a structure, a mandate, a policy, and a plan.
5. Make certain that central or local governments weakened by a disaster are strengthened so that they can adequately manage reconstruction.
6. Have government regulate the work of all stakeholders, verifying their capacity, establishing standards for their work, and ensuring that their interventions are consistent with national policy.
7. Set up reliable monitoring and evaluation procedures to guarantee accountability and transparency.

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B. Community Organizing and Participation

WHY ► It is now widely recognised that community participation is a necessary and integral component of development, and housing reconstruction after disaster, is no exception. Housing in particular, relates to the community's needs and is about providing and securing private assets that will be used, managed and maintained by the community with little or no long-term intervention by government or other agencies and institutions.

There has been a major shift regarding the advantages and need for participation from the initial days of involving community largely as a cost-saving measure (usually by getting them to provide their manual labour without charge to the project) or even getting them to pay some small share of the project costs on the grounds that such payment would increase "buy-in and ownership". Today, community participation is acknowledged to have a larger more integral role in project development and implementation and participation is seen as being more of a two-way process amongst partners.

To ensure that the community participation has the desired outcomes needs careful analysis and planning, starting with community organisation and mobilisation.



WHAT ► To benefit from community organisation and participation, it is necessary to distinguish between and understand the different forms and attitudes to participation, ranging from keeping the community informed and aware of what is being done, to involving the community in one or more aspect or ensuring that they are central to the reconstruction process and provide the lead in setting objectives and choosing alternatives. The box below demonstrates some of these alternative views:

After the 2005 earthquake, the following Guiding Principles were adopted for community organisation and participation:

- Provide an enabling environment to ensure homeowners in charge of rebuilding their own homes and driving their own recovery.
- A community-based approach is an important policy choice taken to complement the individual grants.
- Community based organisations will play a central role in housing reconstruction ensuring that local traditions and social needs are taken into consideration.
- The method for social mobilisation can be left to the judgement of experienced partner organisations or NGOs but a common set of outputs would be generated in each village.
- Where feasible people to be encouraged to come together as group to facilitate communication, access to training, and to engage in collective activities in reconstruction such as joint procurement.
- Use already existing social networks, fora and organisation, avoid duplication of efforts.
- Communities would provide support for vulnerable families within their own villages.
- Build social capital to reinforce messages, strengthen peer pressure towards compliance and a collective culture of sustainable disaster risk reduction.
- The owner driven approach required two way communication to ensure field issues, needs and preferences were identified and incorporated into the programme design and implementation.

| Type of participation | Role of affected population | Level of control |
|---|---|------------------|
| Local initiatives | Conceives, initiates, and runs project independently; agency participates in the community's projects. | |
| Interactive | Participates in the analysis of needs and in program conception, and has decision-making powers. | |
| Through the supply of materials, cash, or labor | Supplies materials and/or labor needed to operationalize an intervention or co-finances it. Helps decide how these inputs are used. | |
| Through material incentives | Supplies materials and/or labor needed to operationalize an intervention. Receives cash or in-kind payment from agency. | |
| By consultation | Asked for its perspective on a given subject but has no decision-making powers. | |
| Through the supply of information | Provides information to agency in response to questions but has no influence over the process. | |
| Passive | Informed of what is going to happen or what has occurred. | Low |

Source: Active Learning Network for Accountability and Performance in Humanitarian (ALNAP), 2003, *Participation by Crisis-Affected Populations in Humanitarian Action: A Handbook for Practitioners* (London: Overseas Development Institute), <http://www.alnap.org/resources/guides/participation.aspx>.

HOW ► After the 2005 earthquake, the Rural Housing Strategy set out to complement the 'owner-based' approach that placed responsibility on the individual, including individual financial assistance, with a community based approach. This was intended to build on existing community based organisations and be flexible for experienced partner organisations to develop appropriate methods of social mobilisation according to context, including avoiding the creation of multiple committees in the same village, and adopting already existing structures. A common set of outputs was proposed for generation in each village. In practice the majority of the communities did not have pre existing indigenous structures of organization or representation, and had not been exposed to development programmes or NGO activities that would have initiated the establishment of formal community based organizations.

Where any structure was in existence it was generally adopted, and where complimentary programmes were being developed by a partner organisation then efforts were taken to avoid

duplication. In general however, the ERRA Rural Housing Programme was the most broad based recovery programme, involving over 600,000 families and 5000 villages. This included villages of high damage where every household was an ERRA MOU holder and other areas of lesser damage where only a small proportion of the village was affected and therefore involved in reconstruction. Although there was flexibility for experienced Partner Organisations to adjust according to their own discretion and a wide range of social contexts, the majority of organisations followed the outline of a 'community housing reconstruction committee' set out initially in the Rural Housing Reconstruction Strategy from the outset in April 2006.

This was described with principles of balancing individual and community approaches and with a list of roles for the committee as follows:

- Inform community about housing reconstruction policies
- Assist mobile team (AI team) in organising assessment, training and inspection
- Lead housing reconstruction planning activities
- Promote earthquake resistant building techniques
- Contribute to data on the community
- Organise collective building material procurement, material quality control and logistics
- Contribute to compliance through advising beneficiaries
- Organise community environment management activities in relation with housing reconstruction
- Support community based land dispute resolution
- Assist vulnerable families

In the development of the programme, the 'community housing reconstruction committee' became the 'village reconstruction committee' (VRC) and the cornerstone and focus of social mobilisation activities. Guidance on the formation of village reconstruction committees was provided in ERRA social mobilisation strategies and training, with the option to form mixed or separate men's and women's VRCs according to local context.

The roles assumed by the VRC included some of the list above but varied widely according to local needs and capacities. In general their role was to act as a mechanism for community engagement, which was very valuable for Partner Organisations, AI teams and ERRA and for the community themselves, rather than as a continuously active implementing organisation.

Community Organisation and Participation

1. Analyze the community's capacity and preferences for participation by working with the community to carry out a Community Participation Profile early in the reconstruction process.
2. Work with the community to reach agreement not only on how it will organize itself, but also on activities and outcomes, i.e., the reconstruction priorities, projects, and goals.
3. Find the right scale for community involvement, which may be smaller than expected.
4. Provide the facilitation and support to make the community an effective actor in reconstruction, and involve the community in monitoring the quality of this support. There will be turnover in the ranks of facilitators, so providing the community with proper support is a continuous process.
5. Consider creating a monitoring mechanism with representation from both the agencies involved in reconstruction and the community, specifically to monitor the quality of community involvement.
6. Do not hesitate to demand good governance and accountability from the community, especially if funding is involved.
7. Do not dis-empower existing community initiatives by introducing new and unfamiliar organizational structures that compete; find ways to combine forces.
8. Consider using existing tools that foster participation, but make sure that they are adapted to the project and context.
9. Understand that stakeholder identification is one of the most important steps in a participatory process; use participatory methods to identify and engage stakeholders.
10. Understand that community participation can have unintended consequences, maintain a constructive relationship with participants, and look for opportunities to support additional activities that spin off from the original participatory process.

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WHEN ► Many aspects of the participation process and strategy are best developed as an ongoing process as part of the implementation process – indeed, an aspect of genuine participation is to develop these procedures together. However, it would be expected that many of the agencies and institutions will have in place principles and basic procedures in place defining the limits of and roles for community participation since it is such an integral component of development.

WHO ► The lead agency should take the lead at establishing the principles of community participation and should take the lead in understanding and promoting community organisation. It is particularly important to undertake a quick assessment of organisations and social networks existing before the disaster and how these may have to be modified subsequently.

There should be little need for the development or creation of new techniques, since a wide variety and range of community participation tools already exist and can be easily adapted. However, there is usually the need to include training programmes, especially for new or modified community organisations, and especially for new roles and tasks that may be assigned to them.

After the 2005 earthquake, the design of the programme clearly promoted the role of women in reconstruction, including the need to have awareness activities which reached women, participation by women in community decision making, and support for women-headed households facing reconstruction tasks. Social mobilisation teams included women staff in both desk and field roles. In some areas this posed a problem of acceptability for local communities, some of whom were unwilling to accept women working in any context, others who were not happy with the idea of women engaged in mobile field teams where they travelled as part of mixed teams with male members of staff. This was partly ameliorated by separating teams so that women moved separately, though in pairs as it was difficult for women to move alone in the field. However, there were still complaints and protests in a number of areas.

C. International, National, and Local Partnerships in Reconstruction



WHY ► The task of reconstruction after disaster, especially after those that are sudden, widespread or affect large numbers of people, cannot be so easily managed by government acting alone, and a better response requires the collaboration of the affected people and communities, as well as local and international non-governmental and international organisations.

In many instances a number of such actors and institutions will respond intuitively with help and assistance, even without any request from, or reference to, government. While both, government acting alone and non-government intervention, are well meant, both could be more effective if such involvement were done in an orchestrated and coordinated manner so that wherever possible the response is coherent and consistent and conflicts and overlaps are minimised.

More importantly, if properly organised, perhaps in the form of partnerships, the impact of the reconstruction effort can be deepened and its implementation hastened.

WHAT ► Partnerships are short or long-term or even permanent collaborations between two or more organisations or institutions. There is usually a documented definition of the objectives of the collaboration and what each partner will bring to and obtain from the collaboration. Rarely are the partnerships between equals and the best partnerships are perhaps where each partner has its own specialisation and skills and brings different resources to bear on the common purpose of the partnership.

In the context of reconstruction after a disaster, the partnerships would be expected to have a specific objective and focus and would be expected to be wound up once the reconstruction tasks have been accomplished. Most members of a partnership would likely be expected to also have similar arrangements of collaboration with other organisations and institutions rather than being exclusively tied to one partner for all their operations. In the case of partnerships between Governments and NGOs or CSOs, for example, the Government is the more likely to define the framework for the operations of the partnership, but even so, for a successful partnership, there has to be some acknowledgement of the legitimate rights and expectations of even the smallest partner.

In Pakistan, at the time of the 2005 earthquake there was little to no capacity on earthquake resistant construction. One of the greatest challenges in the rural housing reconstruction process was to ensure the provision of consistent technical assistance to maximize the investment made by the Government.

In addition, the lack of expertise and experience worldwide among non-governmental organisations in earthquake resistant housing construction made it difficult to identify partners for implementation. Even for those organizations that have housing experience, the earthquake prompted a shift in focus from being a housing provider to housing facilitator – a shift that was not necessarily met with support by donors.

The initial lack of understanding among stakeholders of the importance of a people centered policy, and the reluctance of many donors to support an owner-driven approach had a significant impact on the levels of funding made available to ERRA partner organizations for skill and capacity development for housing reconstruction.

ERRA's institutional partners, the Pakistan Poverty Alleviation Fund, UN-HABITAT, the Swiss Development Cooperation, and during 2006 also the German Technical Cooperation (GTZ), had the joint obligation to strengthen the capacity of the Government, stakeholders and citizens to understand and apply earthquake resistant housing reconstruction policies, principles and techniques.

Twenty nine partner organizations, which consisted predominantly of local and international non-governmental organizations, provided services at village level which included: providing policy information to beneficiaries, training artisans and self-builders in earthquake resistant building techniques, house to house technical assistance, facilitating the establishment of Village Reconstruction Committees, supporting beneficiaries in accessing grievance and redressal mechanisms, supporting Army Assessment and Inspection Teams in organising assessments and ensuring timely inspection at the various construction stages and supporting vulnerable families. In areas where no civilian partner organisation was operational, the Army provided technical assistance and training.

HOW ► For those organisations and institutions that exist largely or mainly for the purposes of post-disaster reconstruction, or have agencies or sections within their organisation that do, the process of collaboration and how to enter into partnerships is likely to be an established process, and setting up a new partnership is likely to be relatively easy and can be usually achieved by drawing upon its previous experience to provide the basis for refining each new partnership.

For those organisations, especially NGOs and CSOs that may have been specifically created in response to the particular disaster event, or have extended their operations in response, the very idea of partnership, especially with larger, more structured and likely more bureaucratic organisations such as the Government may be less than welcome and there may be considerable distrust and reluctance to enter into partnership. The process may be felt to be weakening of and perhaps contrary to their understanding of their functioning as a non-Government organisation.

For Government too, the idea that it should enter into partnership with international or local NGOs and CSOs might seem counter-intuitive and less than welcome.

However, experience globally has demonstrated the advantages and mutual benefit of partnerships, especially when organised and managed properly. There are aspects of disaster reconstruction that Government cannot do as effectively, and equally others that only Government can do that would enhance the operations and objectives of international or national CSOs and NGOs. Having an understanding of the mutual benefits allows for a faster and more supportive interaction and partnership arrangements to be put into place.

Guiding Principles for Partnerships in Reconstruction

- Partnerships between government and international, national, and local organizations are essential to successful reconstruction.
- Partners that arrive later in the recovery period should respect the agreements that earlier-arriving partners made with government and affected communities before their arrival.
- Negotiated rules should govern the collaboration between government, nongovernmental organizations (NGOs), civil society organizations (CSOs), and affected communities in a reconstruction program. The terms of partnerships should be concretely defined and formalized in writing.
- The Global Humanitarian Platform (GHP) "Principles of Partnership" should always be adhered to.
- NGOs and CSOs are almost always more effective when working within their area of expertise and the limits of their capacity and resources.
- Governments have the right and responsibility to require that NGOs and CSOs follow ground rules, conform to the reconstruction policy, and report regularly on their activities.
- Regular reporting by partners, and monitoring and evaluation by government and affected communities can improve the performance of NGO and CSO partnerships

Safer Homes

WHEN ► As with all things relating to disaster reconstruction, having a prior knowledge of the advantages of partnerships and a template for defining the relative roles and demarcation of complementary and conflicting areas of operations allows for the rapid and smooth initiation and implementation of partnerships. Except for a few instances, perhaps with international agencies or larger national organisations, it is unlikely and probably unnecessary that the partnership exists or be set up before the occurrence of any disaster, but it is important to have an acceptance of the idea of partnerships and be able to establish partnerships as and when required with a minimal loss of time, as soon as the nature and need of for reconstruction starts to become apparent.

WHO ► The lead role is likely to be played by Government, and more specifically the agency responsible for disaster reconstruction. This is likely to be assisted and facilitated by international disaster relief and reconstruction agencies who should be in a position to advise the Government of possible and potential forms and areas and types of partnerships.



Recommendations for Partnerships

1. **Government** should decide on the lead agency or individual to work with the United Nations (UN) Humanitarian Coordinator (HC) to agree on the involvement of the UN in the disaster response.
2. The **lead disaster agency** or other designee should work with the UN HC to decide on the role of the UN agencies, including whether the cluster system will be activated, and, if so, in which sectors.
3. The **lead disaster agency**, in consultation with **affected communities**, should agree with partners on the parameters for NGO and CSO involvement in response and reconstruction.
4. The **lead disaster agency** should decide whether a registration process will be required for NGOs and CSOs involved in reconstruction and should agree with them on the coordination mechanisms and reporting procedures to be used.
5. **Partners** should decide, in consultation with **government**, on the coordination mechanisms they will use among themselves.
6. The **lead disaster agency**, **partners**, and the **affected communities** should jointly decide on the system and the benchmarks to be used for monitoring the participation of partners in reconstruction, at the national and community levels.

D. Training Requirements in Reconstruction

WHY ► If there is any aspiration for the housing reconstruction to improve the housing and living conditions compared to what they were before the disaster event, then training – both in terms of skills upgrading and work practices – needs to be provided to the various stakeholders engaged in the process.

Without training it is likely that the houses will be built more or less in the same materials and technologies as they were before. In particular, it is likely that the necessary risk-reduction will not be incorporated into the construction details, leaving the households vulnerable to risks.

WHAT ► To be effective, some training will have to be provided for all levels of stakeholders involved in the reconstruction programme, and cover all aspects and stages of the programme. This means providing training for the technical advisors and those responsible for supervising the programme; to those involved with the various surveys and data collection processes of damage and needs assessment and establishing local and community capacities; to those who will be undertaking the construction; and down to the households and communities themselves.

The all need to be aware of what is being done and why, and what it hopes to achieve, how and by when. Each of them need to have the particular skills they need assessed and enhanced, and to be trained to be able to understand and carry out the specific tasks assigned to them. Those that are going to be involved in information dissemination and awareness raising need to be facilitated to provide them with the right skills as well as getting a comprehensive understanding of the messages they are delivering.

Households and communities need to understand not just what the programme is able to offer them, but also what they have to do to ensure they get what they are entitled to, and also what they must do in return – and, equally importantly, what they must not do, so as not to jeopardise their ability to improve their lives and living standards.

Finally, it is important that to the extent possible, the various training provided is done as a planned and programmed activity, avoiding duplication or overloading. It needs to be done sensitively, in a culturally aware and acceptable manner.

HOW ► The training needs to be properly designed following a training needs assessment wherever possible. The training also needs to be appropriate for the message it has to convey or the skills it has to impart, and for those for who it is intended.



Very little of the training is likely to be provided through formal classroom instruction, and most will have to be on-the-job hand-on training delivered in the field. The box below gives some recommendations for developing appropriate training.

Training Strategy after the 2005 earthquake: The Cascade of Training.

The training strategy was devised to address the challenges of scale and speed, and meet the requirements of quality assurance, consistency, backstopping and supervision. The plan was to establish a corps of master trainers to operate at HRC level, who would train the union council level trainers, who would train the mobile teams, who would train the artisans. Agreed curricula at all levels and a centralized corps of master trainers as source persons would help ensure consistency across the programme, and adherence to the centrally approved ERRA standards.

See diagram:

The foundation for the mobilization of the cascade system was to establish a corps of master trainers. The master trainers were to manage the training of HRC staff, the PO senior staff and the AI teams. They needed to be able to not only deliver training developed at the outset of the programme, but also become a core technical team who could undertake continued research and development, devising additional training, and providing backstopping support to a range of implementing partners.

WHEN ► One of the biggest challenges is to design and develop appropriate training and make it available to the people who need it at the right time. After a disaster, many households, and indeed institutions and community initiate reconstruction work without necessarily waiting for assistance. Even when they start off under a programme of assistance, there may well be stages where they cannot wait for the next step to be initiated formally, and undertake work on their own initiative. If the right training and messages are not available, then actions may be taken which, in hindsight, could have benefited from training and have been done differently.

Recommendations for Training

1. Conduct a rigorous, thorough review of housing damage in the disaster region, and use the knowledge gained as the basis for designing the detailed assessment reconstruction techniques and for developing builder training.
2. Start training only after establishing the rules for assessing the damage to individual houses and developing a consensus on the reconstruction approach and appropriate reconstruction technologies.
3. Hire the strongest and best-prepared core team possible, as it is decisive for the success of the program.
4. The reconstruction approach, the program rules, and the training material and public information are all interrelated. Procure key training staff as early as possible, so that they can be involved in establishing the rules and in preparing training materials and public information.
5. Draw up and implement a comprehensive staffing plan that is coordinated with the overall program. Don't let recruitment become a bottleneck, and be prepared to keep training trainers during the reconstruction program, as there will likely be turnover and dismissals.
6. Adapt the content and organization of the training program to the specific situation and keep both flexible, able to be improved as the reconstruction program progresses.
7. Take the time to research how to improve local building technologies and materials or investigate whether research has been done inside or outside the country, so that the training program is based on scientific knowledge, not intuition.
8. Use demonstrations and simple messages in training, so that even those builders without formal training (crafts persons and homeowners) will understand the concepts and instructions

them. Again, having training available in time would minimise some of these misjudged and misguided activities.

WHO ► The key decisions for training have to emanate from the policy being designed by the lead agency. As part of that process, they should investigate the extent to which available skills and capacities will be capable of delivering the strategy, and what training programmes will be required for whom. For this, they should use the services of specialised training institutions, especially for the specific skill sets required. See box below.

Key Decisions for Training

1. The lead disaster agency should decide how reconstruction training will be managed within the context of the housing and community reconstruction strategy and ensure that adequate staff and resources are available for the lead training agency.
2. The lead training agency should help decide on the reconstruction approach after conducting a thorough review of housing damage in the disaster region and, based on that review, design the training program.
3. The lead training agency should decide on the requirements and begin recruitment of the core team, the trainers, and the field teams as early as possible, even while the training program is being designed.
4. Agencies involved in reconstruction should decide on the human and financial resources they can provide to assist with the development of the training program and with the complete dispersion of training activities and materials throughout the disaster region.
5. Agencies involved in reconstruction should coordinate with the lead training agency to incorporate training into their projects and to agree on standards and procedures for monitoring and evaluation of training activities.
6. Local governments should coordinate closely with the lead training agency and should ensure that relevant local building codes, guidelines, and approval procedures are incorporated in the training program.
7. Civil society organizations associated with the building trades and academic institutions should decide how they can support the training process and contribute their expertise to the development and implementation of the training program.

In many cases, contractors, craftsmen and those in authority may be asked for advice, and rather than admitting that they do not know the answer, will provide the best response available to

