Guiding Principles for Assessing Damage and Setting Reconstruction Policy

- For early, rapid assessments, timely presentation of assessment data takes precedence over exhaustive analytical precision. However, rapid assessments are generally followed by more detailed, sector-specific assessments.
- Joint (multi-donor) assessments and standardized assessment methodologies produce benefits in terms of efficiency, quality, and common understanding of the disaster situation.
- Data collected during assessments—whether multi-sectoral or sector-specific—should be shared, if possible, to reduce duplication of efforts.
- Consultation with affected communities is essential and is possible even in rapid-onset emergencies. Affected communities may want to conduct their own assessments.
- A detailed housing condition assessment is always necessary to estimate the total cost of reconstruction and to allocate the resources.
- Assessment should focus not just on bricks and mortar; the social condition of the people, their working ethos, their willingness to participate, and cultural values all affect reconstruction.
- The particular needs of different groups and individuals (e.g., men, women, the elderly, children) should be evaluated during assessments. Marginalized and vulnerable populations must be sought out and their needs and interests incorporated into reconstruction policy.
- The reconstruction policy is pivotal because it establishes the expectations of the affected community and provides the framework for intervention by local and international actors.
- Communicating the reconstruction policy effectively to those affected by it is almost as important as defining it well. The added value of communication is highest when included from the beginning.

Introduction

Until the impact of a disaster is assessed, no significant or systematic response can be mobilized. For that reason, assessment is one of the most powerful tools in the disaster response tool kit. Assessments help to establish the extent of post-disaster damage, loss, and needs, and they come in many forms: rapid, detailed, multi-sectoral, and sector-specific. In housing and community reconstruction, a house-to-house assessment of housing damage should always be done. In addition, an assessment of the housing sector may be done. Many assessment methodologies exist; numerous efforts are under way to improve and standardize them.

The principal tradeoff in conducting a rapid assessment is timeliness versus accuracy and completeness. Early data will be more subject to revision over time, but having early information on damage and needs and estimates of reconstruction costs facilitates the initial appeals and response.

Once a disaster’s impact is understood and can be quantified, reconstruction planning can begin. Ideally this is coordinated with government’s definition and announcement of its reconstruction policy. Reconstruction policy lays out the “rules of the game” for reconstruction, especially the roles of various actors and how they will coordinate, the forms of support that will be provided, and the risk reduction measures that will be taken against future disasters.

This chapter presents the current state of the art of post-disaster assessments and provides some good examples of methodologies. It also explains what the scope and content of a post-disaster reconstruction policy should be and summarizes two examples.
Key Decisions
1. **Government** must designate the agency responsible for assessment; this is often the lead disaster agency, but it may be a statistical or technical agency in government or academia.
2. The **agency responsible for assessments** must decide how it wants the assessment process to be organized and coordinated, the assessment instruments it prefers, and whether and how assessment data will be shared. Humanitarian agencies usually provide assistance with rapid assessments in the early weeks.
3. The **agency responsible for assessments** should coordinate with **local government**, **agencies involved in reconstruction**, and the **affected communities** to define the rights of the communities with respect to assessment, including the management of their personal data, and their participation in the assessment process.
4. **Government** must designate the agency responsible for reconstruction policy, which will vary depending on the scale of the disaster and the institutional roles defined in national disaster policy. For a localized disaster where subnational government is strong, the responsible agency may be subnational government.
5. The **agency responsible for reconstruction policy** should decide how it will consult with stakeholders, including affected communities and agencies who wish to be involved in reconstruction, before announcing the reconstruction policy.
6. The **agency responsible for reconstruction policy** must establish the basic parameters of the reconstruction policy, including the household assistance strategy, before making its initial policy announcement, but may refine the policy over time.
7. **Agencies involved in reconstruction** should decide with **government** how to make project plans consistent with housing and infrastructure sector policies.

Public Policies Related to Assessment and Reconstruction Policy
If government has preplanned its disaster policy and institutional response for housing and community reconstruction, this plan—and the assessment process it contemplates—has only to be activated. If this has not been done, decisions on assessment procedures and policy will need to be made extemporaneously.

If a country has good social and economic data on the population and built environment affected by the disaster, the initial assessment can be greatly accelerated and its quality can be improved. Information and communications technology (ICT) is increasingly being employed in this way. The initial damage and loss assessment (DaLA) after the 2008 Wenchuan, China, earthquake was conducted exclusively using government data sources and satellite imagery. This does not eliminate the need for on-the-ground assessments, but greatly accelerates initial assessments. Existing social and economic databases can also provide a baseline for post-disaster assessments, making the quantification of damage more reliable.

The reconstruction policy should take into consideration existing sector strategies and capital investment plans in the sectors affected by the disaster, such as housing, infrastructure, health, education, and transport. Government should coordinate with agencies involved in reconstruction to ensure that project plans based on assessments are also consistent with sector policies. The government of the Indian state of Tamil Nadu, for example, made a policy decision to include thousands of vulnerable households not affected by the 2004 Indian Ocean tsunami in the post-disaster housing reconstruction program and to require that sanitation was provided in all reconstruction sites, as described in the case study below.
**Technical Issues**

**Assessment Types and Definitions**

<table>
<thead>
<tr>
<th>Type</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Damage assessment</td>
<td>An assessment of the total or partial destruction of physical assets, both physical units and replacement cost.</td>
</tr>
<tr>
<td>Loss assessment</td>
<td>An analysis of the changes in economic flows that occur after a disaster and over time, valued at current prices.</td>
</tr>
<tr>
<td>Needs assessment</td>
<td>An assessment of the financial, technical, and human resources needed to implement recovery, reconstruction, and risk management. Usually &quot;nets out&quot; resources available to respond to the disaster.</td>
</tr>
<tr>
<td>Rights-based assessment</td>
<td>An assessment that evaluates whether people’s basic rights are being met. Has its origins in the United Nations Universal Declaration of Human Rights.</td>
</tr>
<tr>
<td>Rapid assessment</td>
<td>An assessment conducted soon after a major event, usually within first two weeks. May be preceded by an initial assessment. May be multi-sectoral or sector-specific. Provides immediate information on needs, possible intervention types, and resource requirements.</td>
</tr>
<tr>
<td>Detailed assessment</td>
<td>An assessment undertaken after the first month to gather more reliable information for project planning. Often takes about a month to conduct, and is usually sector-specific.</td>
</tr>
<tr>
<td>Housing damage assessment</td>
<td>A damage assessment that analyzes the impact of the disaster on residential communities, living quarters, and land used for housing (see details, below).</td>
</tr>
<tr>
<td>Housing sector assessment</td>
<td>An assessment of the policy framework for housing, the post-disaster housing assistance strategy, and the capability of housing sector institutions to carry it out (see details, below).</td>
</tr>
<tr>
<td>Communication-based assessment (CBA)</td>
<td>An assessment that analyzes how the context will affect reconstruction and the way in which communication with the affected community can support the reconstruction effort. It includes government and political risk analysis, stakeholder analysis; media, communication environment, and local capacity analysis; and social and participatory communication analysis.</td>
</tr>
</tbody>
</table>

**Convergence of Assessment and Analysis Methodologies**

Experts working in the disaster field have been confounded in recent years by the array of post-disaster assessments, assessment terminology, and assessment methodologies they encounter. As a result, the United Nations (UN) clusters and other international agencies, including the World Bank, are engaged in various efforts to standardize and improve assessment and analytical tools at all phases of an emergency and to establish indicators, definitions, improved methodologies, standardized information requirements, and accepted thresholds for humanitarian action. A related effort is under way to build partnerships for joint assessments and information consolidation. All of these initiatives aim to address needs for better information for sectoral programming and more timely information at the onset of an emergency. Two of these efforts are especially significant, as discussed below.

**Assessment and Classification of Emergencies.** The UN Office for the Coordination of Humanitarian Affairs (UN OCHA) established the Assessment and Classification of Emergencies (ACE) project in 2008 in an attempt to map the various humanitarian assessment initiatives currently under way and to facilitate the development of an overarching approach to assessment. In February 2009, UN OCHA issued its “Mapping of Key Emergency Needs Assessment and Analysis Initiatives: Final Report,” which analyzes the main assessment and analysis framework initiatives under way at the global level. However, a wide variety of multi-sectoral and/or sector-specific tools used by particular organizations in the field were not analyzed, including those of donors.

The report organizes the various assessment initiatives in three categories:

1. standards-related initiatives, which serve as a foundation for assessment tools and data collection (for example, the Sphere Project);
2. primary data collection, distinguishing between rapid and in-depth assessments (for example, the Local Estimate of Needs for Shelter and Settlement [LENSS], described below, being developed by the Inter-Agency Standing Committee [IASC] Emergency Shelter Cluster); and
3. analysis frameworks, where information and data generated by the two previous categories are integrated into a framework for analysis and/or planning (for example, the Post-Disaster Needs Assessment [PDNA] project, described below, being carried out by the UN, the World Bank, and the European Commission [EC]).

---

2. Information on sector-specific assessments is found in several chapters of this handbook.
3. For a detailed explanation of a Communication-Based Assessment, refer to Chapter 3, Communication in Post-Disaster Reconstruction.
As part of this effort, the ACE working group prepared a sequencing framework, which is useful for understanding when the various needs assessment initiatives (not all of which are yet in use) are being or would be applied within the emergency timeline. The timeline includes 24 separate assessments instruments or initiatives.

**Needs Assessment Task Force.** Since the issuance of the ACE report, a Needs Assessment Task Force (NATF) has been appointed, co-chaired by UN OCHA and the International Federation of Red Cross and Red Crescent Societies (IFRC). NATF was created to strengthen decision making and to improve response by harmonizing and promoting cross-sector needs assessment initiatives that produce consistent, reliable, and timely data on humanitarian needs. Initially focusing its work on preparedness, Phase I (first 72 hours), and Phase II (first 2 weeks) in sudden onset emergencies, NATF will later work on Phase III (second 2 weeks) onward, including early recovery, and will address slow onset emergencies, as progress is made on the first phases.

If the effort to harmonize assessment methodologies is successful, future results will include (1) development of a consolidated needs assessment “tool box,” including standardized tools, such as forms and questionnaires that can be adapted for specific contexts; (2) better data management and reduction in the unnecessary collection of similar information; (3) the development of a core set of indicators per sector, which would be consistently collected, thereby improving data aggregation, prioritization of needs across sectors, and equitable response; and (4) multi-sectoral needs assessment tools to collect core common data for decision making and immediate life-saving interventions. In the meantime, governments and agencies working in reconstruction will encounter a variety of assessment methods and tools, and should carefully evaluate the quality of the outputs from these methodologies before acting on them.

**Post-Disaster Needs Assessment project.** The PDNA project is a cooperative effort between United Nations agencies (led by the United Nations Development Programme as the Chair of the Cluster Working Group on Early Recovery (CWGER)), the World Bank, and the EC to develop a practical guide to a multi-stakeholder PDNA and a recovery framework (RF).

The objective of this project is to develop a shared understanding of the impact of a natural disaster by integrating assessment methods used by international financial institutions (IFIs) (primarily the DaLA methodology developed by UN Economic Commission for Latin America and the Caribbean [ECLAC], which was published in 1991 and reissued in an updated format in 2003), which focus on macro-economic issues, and those used by the IASC humanitarian clusters, UN agencies, and nongovernmental organizations (NGOs), which tend to be sectoral and to have a humanitarian focus. It ultimately aims to improve coordination and capacity at national and international levels to conduct recovery-oriented needs assessments and to carry out recovery planning, in order to connect national plans with the delivery of recovery programs at the local level.

Expected outputs from the PDNA project include (1) protocols of cooperation between the United Nations, the World Bank, and the EC covering joint missions and capacity building; (2) a practical guide to multi-stakeholder PDNA and the RF; and (3) field-testing and training on the framework in high-risk countries with national and international recovery partners. In addition, sectoral assessment methods that are relevant to PDNA will be adapted to enable them to better determine early recovery needs in each sector.

**Review of Selected Assessment Methodologies**

Governments and agencies involved in housing and community reconstruction should be familiar with some of the common or especially useful assessment methodologies. The following section presents a brief description of some common assessment types, including multi-sectoral assessment (DaLA and community-led assessment), housing sector assessment, and community-specific assessment (LENSS and housing damage assessment).

Good practice in conducing assessments is universal, regardless of the type of assessment. This includes the need to compose assessment teams so that they incorporate the appropriate expertise and representation, including representation of the affected community, and the importance of properly training assessors in the use of the assessment instrument, the definitions of assessment terms, and the peculiarities of the assessment environment, so that the results are consistent.
Chapter 2: Assessing Damage and Setting Reconstruction Policy

### Methodology

#### Considerations

### Multi-Sectoral Assessment

**Damage and loss assessment**

The principal multi-sectoral preliminary assessment methodology used in recent years by IFIs, such as the World Bank, is the DaLA methodology developed by ECLAC. The assessment process is sometimes referred to as a “joint rapid assessment.” This is generally conducted as soon as possible after the initial disaster response is over. A DaLA is a detailed assessment methodology that estimates the direct economic impact (lost wealth), indirect economic impact (effect on gross domestic product), and secondary effects (fiscal impacts) of a major natural disaster. The methodology provides guidelines for social sectors, including housing, infrastructure, economic sectors, and damage assessment. Numerous examples of completed DaLAs are available from the World Bank. A DaLA is a detailed yet rapid assessment that is conducted as early as possible after a disaster. It is not a substitute for either detailed, sector-specific assessments or a detailed, door-to-door housing condition assessment, both of which come later. DaLA results are often used by donors to establish initial financial commitments for housing and community reconstruction.

**Rapid, joint, multi-sectoral – 1st month**

Complementing traditional agency-led assessments with community-led assessments (CLAs) provides a more complete view of the needs and capacities of the affected population. CLAs will help capture the social and psychological impacts on a community, including livelihoods, and the resources available to survivors. Because these factors affect reconstruction, they should not be overlooked; reconstruction can only begin once the household is stabilized. The CLA team must include representation of all community groups in the assessment area and be coordinated by an entity trusted them all (e.g., local government, or local or international NGO).

The Community Damage Assessment and Demand Analysis (CDADA), developed by the All India Disaster Mitigation Institute, is a very good CLA methodology. It is a detailed multidisciplinary, multi-sectoral, multicultural assessment that is adaptable to every disaster type, and can produce sector-specific outputs. The CDADA applies the Sphere Project principles and the IFRC Code of Conduct and emphasizes the role of affected communities, local governments, and community organizations.

### Housing Sector Assessment

**Housing sector assessment**

A housing sector assessment can be very useful after a disaster to analyze the capacity of an affected region’s institutional framework for land tenure and housing and community development, its housing production and finance system, and the impact of the disaster on this system. If it is conducted early (within the first few weeks of the disaster) in parallel with other assessments, the results of the housing sector assessment can be used in the formulation of the overall reconstruction policy and in defining the housing assistance strategy. If reconstruction has already begun and stakeholders are not satisfied with the results, a housing sector assessment will diagnose what is going wrong.

The importance of a housing sector and land tenure analysis may not be recognized early on. People may assume that recovery will not conform to “normal” procedures anyway, but will instead be done using “special” arrangements. However, this may not be the most sustainable reconstruction approach. Outside agency support to post-disaster reconstruction rarely runs long enough, or provides sufficient resources, for full recovery. Local development, housing, and land tenure issues that emerge after a disaster are often not new, but the disaster may exacerbate any weaknesses in the system. Reconstruction challenges—widespread poverty, extensive informality in the housing system, or a large number of housing units that need to be reconstructed—will just make the problems more visible.

A housing sector assessment can also help government and agencies involved in reconstruction identify long-term housing sector reform initiatives. A detailed methodology for a post-disaster housing sector assessment is included in Annex 1, How to Do It: Conducting a Post-Disaster Housing Sector Assessment.

### Other Detailed Sector Assessments

**Detailed, sector-specific – 1st quarter**

Detailed sector assessments are likely to be carried out in other sectors as inputs to housing and community reconstruction planning, as discussed in other handbook chapters. These assessments can include, among others, environmental assessments, communications-based assessments, cultural heritage assessments, social assessments, and corruption risk assessments.

### Local Housing Assessment

**Local Estimate of Needs for Shelter and Settlement**

The LENSS methodology is designed for rapid shelter and settlement needs assessment in the immediate aftermath of a disaster and before the recovery phase. It provides a systematic assessment methodology and a series of extremely clear formats for collecting and organizing shelter data for a specific locality, which may be collected directly or extracted from other sources.

The tool kit is intended to be used to conduct a needs assessment of and by a locality, in whatever way the population is able to organize itself after the disaster, so that it is prepared to deal with agencies that offer to assist, but it could also be used by an agency itself. One innovation in the LENSS methodology is the use of a storytelling approach to explaining the shelter situation in the community.

### Annex 1, How to Do It: Conducting a Post-Disaster Housing Sector Assessment

9. For example, the 2009 Bhutan earthquake occurred on September 21, 2009. A joint rapid assessment was conducted by the government of Bhutan, the World Bank, and UN, using a combination of the DaLA and Poina methodologies, between September 30 and October 14, 2009, http://gfdrr.org/docs/Bhutan_Rapid_Needs_Assessment_Report_Oct_09.pdf.


Methodology Considerations

Housing damage (or condition) assessment

**Detailed, sector-specific – 1st to 2nd month**

A housing damage assessment is the necessary first step that will eventually permit the reoccupancy of residential buildings. It provides the evidence needed to support decisions about providing housing assistance, training, and technical assistance for reconstruction. The assessment process is made up of a predictable set of activities, and procedures for a number of them can be established ahead of the disaster to speed up the initiation of the post-disaster housing damage assessment process. A detailed methodology for a housing damage assessment is included in Annex 2, How to Do It: Assessing Post-Disaster Housing Damage.

Beside demonstrating to citizens that recovery is beginning, housing assessments serve other purposes: (1) public safety: identify whether houses can be occupied during reconstruction (a housing safety inspection process may be required); (2) planning: to quantify the funds, time, and other resources required for recovery; (3) technical: provide information of the types of damage and the technical skills required in reconstruction; and (4) economic and social: to provide data on the impacts of the disaster at the household level.

Other chapters of the handbook provide information related to damage assessments, including Chapter 5, To Relocate or Not to Relocate (decisions about relocation of housing and communities); Chapter 10, Housing Design and Construction Technology (how disasters damage housing and how design and technology affect housing disaster resistance); and Chapter 16, Training Requirements in Reconstruction (how reconstruction training is designed and executed using the housing damage assessment results).

---

**Data Management Issues in Assessment**

**Managing data.** Different organizations and agencies collect post-disaster data independently at different periods and on different scales, often duplicating efforts and collecting data in a way that hampers data integration and comparison. Multiple assessments may fail to yield comprehensive, accurate, reliable, and timely assessments that are adequate to support a smooth transition between relief, recovery, and reconstruction. Geo-referencing is an example of a practice that improves the value of information and its ability to be shared, if it is collected using agreed-to standards.

Sharing disaster assessment data reduces duplication of effort and cost. UN OCHA is promoting the use of Humanitarian Information Centers (HICs), geographic information systems (GIS), data standardization, and other tools to make post-disaster data collection more efficient. See Chapter 17, Information and Communications Technology in Reconstruction, for a discussion of HICs and other information and technology-related strategies relevant to reconstruction.

Managing assessment data is not without its risks. Some consider that assessment data should be treated effectively as a “public good,” and the merits of this point of view are easily understood with respect to avoiding the duplication of data collection efforts. “Assessment fatigue” on the part of affected communities is frequently mentioned, and sharing data can help reduce this problem as well. However, data collected in assessments need to be handled and presented with care, since they represent personal information and in some cases may be of a nature that they are protected by confidentiality laws. The fact of the emergency should not override these rights. Information collected in assessments will also reflect the biases of both the informants and the assessors, and biases may affect the interpretation of data collected as well. If the assessors are not experienced, training will be needed before they conduct the assessment. Lastly, assessment data should be compared to baseline information, which may reside in government, but and be readily available.

Good assessment design, data collection protocols, and data management procedures can help control the risks mentioned above. Assessment design and data collection should anticipate how the information will be used. Rules for data confidentiality and disclosure should also be established. If a HIC or other common data management system is established, its functions can include review of assessment instruments, tabulation and interpretation of data, securing and management of baseline data, and definition of rules for data management and disclosure.

**Ensuring data quality.** For primary data, it may be advisable that data collection be organized at an interagency level and led by government, with one government department taking the lead in coordinating and managing data collection across departments and with agencies to ensure that:

---

Data are collected on the basis of an agreed-to and mutually consistent analysis plan; damage classification criteria and categories are consistent across sectors; damage classification criteria are consistent within a sector, and across various administrative/geographical divisions; data are validated using empirical tools and plausibility checks; and baseline asset classification, such as definitions of various types of houses and categories of infrastructure, such as primary, secondary, and tertiary infrastructure, is consistent among assessments and with public accounts.

If independent assessment teams are concurrently determining damage levels or reconstruction needs, then guidelines and tools should be made available to ensure the consistency of the estimates of need, such as use of common rates and uniform reconstruction benchmarks for housing and infrastructure. Templates can be developed to ensure that damage data are being collected in a structured and uniform manner. Orientation sessions for assessors are essential to train them on the meaning of terms used in the templates, as well as on collection methods. Assessment teams should practice on damaged houses until their results are consistent. See Chapter 16, Training Requirements in Reconstruction, for more advice on training assessors.

**The Needs of Vulnerable Groups in Assessments**

Vulnerable groups include displaced people, women, the elderly, the disabled, orphans, and any group subject to discrimination. Vulnerable groups may be omitted from assessments unless an effort is made to ensure their involvement. This is not just a quantitative issue, but a qualitative one, since addressing the post-disaster needs of these groups may require that special measures be taken in reconstruction. Good practices include:

- involving vulnerable group members in assessment and in all stages of decision making;
- obtaining information about the needs of the affected group from both men and women;
- collecting data disaggregated by sex, age, health status, economic class, etc., and then using the disaggregated data in both program planning and monitoring;
- paying special attention in assessments to groups that experience social exclusion (such as the handicapped, widows, and female heads of household); and
- assessing disaster impact on the informal social protection systems that vulnerable groups depend on, not just the “bricks and mortar” impacts.

**Defining Reconstruction Policy and Programs**

Governments who have put emergency management plans, structures, and arrangements in place for preparedness and response are better prepared to define the institutional arrangements and reconstruction policy for any particular disaster. If the emergency management plan includes safeguard measures to help at-risk communities prepare for disasters, those communities not only are likely to be less affected by the disaster, they will be in a better position to manage reconstruction. For these reasons, it’s critical that governments—especially those in vulnerable countries—make a serious commitment to implementing, or continuing to implement, the Priorities for Action of the Hyogo Framework for Action, shown at right. Technical assistance is available from the Global Facility for Disaster Reduction and Recovery (GFDRR), the International Strategy for Disaster Reduction (ISDR), and other international agencies to design and implement disaster risk and emergency management plans.

The flowchart entitled “The Process of Response and Reconstruction” included after the handbook’s table of contents provides an overview of the types and sequence of decisions policy makers will be required to make in reconstruction. Individual chapters of this handbook discuss sector-specific policy options that should be considered, such as policies for environmental management, land use planning, and disaster risk management, to name a few. However, this section stresses the importance of elaborating an integrated reconstruction policy and strategy to guide the reconstruction program and communicating it broadly. While this is needed for all sectors, this section focuses specifically on the policy for housing and community reconstruction.

**Hyogo Framework for Action Priorities for Action**

1. Making disaster risk reduction a priority.
2. Improving risk information and early warning.
4. Reducing the risks in key sectors.
5. Strengthening preparedness for response.


The Six Dimensions of Governance

Governance is defined as the traditions and institutions by which authority in a country is exercised. This includes the process by which governments are selected, monitored, and replaced; the capacity of government to effectively formulate and implement sound policies; and the respect of citizens and the state for the institutions that govern economic and social interactions among them. WGI measures six dimensions of governance that correspond to this definition.

1. **Voice and Accountability**: the extent to which a country’s citizens are able to participate in selecting their government, as well as freedom of expression, freedom of association, and a free media

2. **Political Stability and Absence of Violence**: the likelihood that government will be destabilized or overthrown by unconstitutional or violent means, including politically motivated violence and terrorism

3. **Government Effectiveness**: the quality of public services, the quality of the civil service and the degree of its independence from political pressures, the quality of policy formulation and implementation, and the credibility of government’s commitment to such policies

4. **Regulatory Quality**: the ability of government to formulate and implement sound policies and regulations that permit and promote private sector development

5. **Rule of Law**: the extent to which agents have confidence in and abide by the rules of society, and in particular the quality of contract enforcement, property rights, the police, and the courts, as well as the likelihood of crime and violence

6. **Control of Corruption**: the extent to which public power is exercised for private gain, including both petty and grand forms of corruption

---


---

### The political economy of reconstruction

In recent analytical work conducted on improving the results of policy reform related to poverty reduction, the World Bank has defined “political economy” as the study of the interactions between political processes and economic variables. A political economy perspective provides insight into the dynamics of reform processes within a country or locality. Stakeholders’ interests, and the power relations between social actors, influence their support or opposition to reforms. According to the Bank, the sequencing and timing of actions associated with policy reforms can also determine the level of tension and conflict, the duration, and ultimately the success or failure of reforms.

Reconstruction may not be viewed as policy reform per se, especially due to the accelerated nature of the reconstruction process. However, to the extent that the way in which reconstruction is carried out changes the power relationships or allocation of resources within society, it has many of the same effects as traditional policy reform. For instance, if tenure security is provided to affected communities in reconstruction (as this handbook recommends), there is an economic transfer to those communities, which, as a result, gain social standing and potential future influence.

Political economy factors will be brought to bear on the reconstruction process as economic and social interests vie for influence in many areas, including (1) setting the reconstruction agenda, (2) managing the message through communications with the public, (3) allocating the resources among social groups, and (4) gaining access to the resources being spent. Governments should analyze how political economy factors constitute risks or opportunities for the reconstruction program—including looking at how stakeholders are using their position to protect or strengthen their political or economic interests by building coalitions, negotiating, building consensus, and bargaining to generate outcomes that are favorable to them—and be prepared to manage this aspect of reconstruction. This may require the assistance of political scientists or political economy experts.

Because, inevitably, reconstruction benefits some more than others, and because government itself is part of a country’s political economy, it is impossible to inoculate the reconstruction process from political economy influences. Good governance of the reconstruction process is the best antidote. Therefore, the goal in reconstruction should be to establish and orchestrate a reconstruction process whose outcomes promote social equity and reflect good governance practices. The dimensions of governance used in the Worldwide Governance Indicators (WGI) project, shown in the text box, above, have become widely accepted. Good governance practice material is cited throughout Chapter 19, Mitigating the Risk of Corruption, and its annexes.

### Challenges in defining reconstruction policy

Data collected during assessments are critical evidence for establishing the reconstruction policy. However, it is highly likely that not all the necessary information will be available when the policy is first outlined and even announced publicly. For instance, a rapid assessment of housing damage may give government an estimate of the number of affected households, and perhaps of the extent of housing damage, but is unlikely to provide reliable estimates of the cost of repairing or the number of houses that will need to be demolished. That requires a housing damage assessment. This “information lag” creates a number of challenges that policy makers are forced to confront in defining and announcing reconstruction policy.

---

For access to additional resources and information on this topic, please visit the handbook Web site at www.housingreconstruction.org.
Policy making challenge | Advice to policy makers
--- | ---
The reconstruction policy will be a work in progress that will need to be updated as more information becomes available. | Avoid announcing the details of assistance schemes before collecting relatively reliable data on the households affected, to avoid making commitments to the affected community that may become difficult to keep for logistical or financial reasons.
Affected communities and other stakeholders should be consulted with about the parameters of the reconstruction policy before those parameters are finalized. Avoiding this step can establish a dynamic of mistrust that will be difficult to overcome later. | Avoid presenting the reconstruction policy as final before a substantive dialogue concerning reconstruction has taken place with stakeholders. See the case study on Tamil Nadu reconstruction, below, for examples of how stakeholder consultation was used before reconstruction policies were announced.
Decisions made early in the response may affect how reconstruction can be carried out. As explained in Chapter 1, Early Recovery: The Context for Housing and Community Reconstruction, government—working with the humanitarian community in the first two weeks after the disaster—is likely to have conducted the initial assessment, announced a rapid appeal, and defined project level work plans. | Realize that early shelter decisions may affect the options available later in the reconstruction program and think carefully about the longer-term implications of short-term solutions. A decision to move the entire population to camps, as opposed to providing in-situ transitional shelter solutions, for example, could disperse an affected community to such a degree as to make a community-led reconstruction approach nearly impossible.
Announcing the assistance scheme before assessments are conducted may create an incentive for homeowners to damage their houses in order to receive the announced benefit, and result in multiple assessments and extensive processing of grievances. | Conduct at least an initial census and housing damage assessment before announcing housing assistance schemes.

The lack of involvement in these early assistance policy discussions of the IFIs who may provide the financing to government for reconstruction has been identified as an international coordination issue that needs to be addressed. This is one of the motivations for the efforts to harmonize assessment methods discussed earlier in this chapter.

The parameters of the reconstruction policy. Two case studies of successful reconstruction policies are included below. While there is no template for a reconstruction policy, the chapters of this handbook represent the critical areas that need to be covered in such a policy, and each provides relevant advice for policy makers. Particularly important are the chapters in Section 1, Assessing Impact and Defining Reconstruction Policy, and Section 2, Planning Reconstruction. The scope of the policy, and the corresponding handbook chapters, include the following.

<table>
<thead>
<tr>
<th>Policy section</th>
<th>Content</th>
<th>Reference in handbook</th>
</tr>
</thead>
<tbody>
<tr>
<td>Background and Context</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Context for reconstruction</td>
<td>Overview of the response and early recovery. Roles and responsibilities of agencies involved to date. How early decisions and actions will be coordinated with reconstruction policy</td>
<td>Chapter 1, Early Recovery: The Context for Housing and Community Reconstruction</td>
</tr>
<tr>
<td>Assessment of damage</td>
<td>Concrete definition of the scope and nature of the disaster and disaster impacts that the reconstruction policy needs to address</td>
<td>Chapter 2, Assessing Housing Damage and Setting Reconstruction Policy</td>
</tr>
<tr>
<td>Goals and objectives</td>
<td>Physical, social, and economic goals and objectives of the reconstruction program Based on the initial damage and loss assessment and sector-specific assessments as they become available</td>
<td>Chapter 2, Assessing Housing Damage and Setting Reconstruction Policy Chapter 4, Who Gets a House? The Social Dimension of Housing Reconstruction</td>
</tr>
<tr>
<td>Institutional Strategy</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Program implementation</td>
<td>Definition of the institutional arrangements for managing reconstruction, including the role of local governments</td>
<td>Chapter 13, Institutional Options for Reconstruction Management</td>
</tr>
<tr>
<td>NGO/CSO role and coordination</td>
<td>Definition of the role of international, national, and local NGOs and CSOs in reconstruction, and mechanisms for coordination</td>
<td>Chapter 14, International, National, and Local Partnerships in Reconstruction</td>
</tr>
<tr>
<td>Financial Strategy</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Housing assistance scheme</td>
<td>Special measures to address the housing and reconstruction requirements of vulnerable households and groups</td>
<td>Chapter 4, Who Gets a House? The Social Dimension of Housing Reconstruction</td>
</tr>
<tr>
<td>Policy section</td>
<td>Content</td>
<td>Reference in handbook</td>
</tr>
<tr>
<td>----------------</td>
<td>---------</td>
<td>-----------------------</td>
</tr>
<tr>
<td>Financial mobilization, tracking, and management</td>
<td>Sources of financing and means for coordinating and monitoring expenditures and results</td>
<td>Chapter 15, Mobilizing Financial Resources and Other Reconstruction Assistance</td>
</tr>
<tr>
<td>Financial assistance delivery and materials facilitation</td>
<td>The financial assistance concept and the assistance scheme for different categories of the affected population</td>
<td>Chapter 22, Financial Management in World Bank Reconstruction Projects</td>
</tr>
<tr>
<td></td>
<td>The policy for the facilitation and provision of construction materials at the locality or household level</td>
<td>Chapter 23, Procurement in World Bank Reconstruction Projects</td>
</tr>
</tbody>
</table>

**Community Participation**

<table>
<thead>
<tr>
<th>Content</th>
<th>Reference in handbook</th>
</tr>
</thead>
<tbody>
<tr>
<td>Communications strategy</td>
<td>The modes of communication to consult with affected communities and the general public, to receive feedback and suggestions, and to share reconstruction decisions and updates</td>
</tr>
<tr>
<td>Community organization and participation</td>
<td>How households and communities will be mobilized to participate in reconstruction. The roles of households and communities in reconstruction</td>
</tr>
</tbody>
</table>

**Reconstruction Approach**

<table>
<thead>
<tr>
<th>Content</th>
<th>Reference in handbook</th>
</tr>
</thead>
<tbody>
<tr>
<td>Relocation policy</td>
<td>The basis for relocation decisions, including criteria, decision process</td>
</tr>
<tr>
<td>Reconstruction approach (Defined in consultation with the affected households)</td>
<td>The role of households, contractors, and agencies in reconstruction</td>
</tr>
<tr>
<td></td>
<td>Need for transitional or temporary shelter</td>
</tr>
<tr>
<td>Land use and infrastructure reconstruction</td>
<td>Improving the disaster resilience of land use and construction</td>
</tr>
<tr>
<td></td>
<td>The regulatory framework to ensure the safety of reconstruction and the allocation of responsibilities between the public and private sector for compliance</td>
</tr>
<tr>
<td>“Build back better” in housing reconstruction</td>
<td>The strategies to apply “build back better” principles in housing reconstruction</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>Grievance redressal</td>
<td>Information on the means by which households and affected communities may have their grievances heard and addressed</td>
</tr>
<tr>
<td>Technical assistance and training</td>
<td>The nature of the technical assistance and training to be provided to local governments, communities, and households</td>
</tr>
</tbody>
</table>

**Risk Management**

<table>
<thead>
<tr>
<th>Content</th>
<th>Reference in handbook</th>
</tr>
</thead>
<tbody>
<tr>
<td>Environmental management</td>
<td>How the environmental impact of the disaster will be addressed and the environmental, social, and economic impact of reconstruction and relocation will be minimized</td>
</tr>
<tr>
<td>Environmental and social safeguard policy framework</td>
<td></td>
</tr>
<tr>
<td>Disaster risk management</td>
<td>Means for establishing standards for disaster risk reduction in reconstruction for relocated and unrelocated communities and mitigation measures to be employed</td>
</tr>
<tr>
<td>Anticorruption strategy</td>
<td>Define the measures to be taken by government other agencies to minimize corruption</td>
</tr>
<tr>
<td>Monitoring and evaluation</td>
<td>The information and communications technologies to be employed in reconstruction</td>
</tr>
<tr>
<td></td>
<td>The means to ensure transparency, permit the reporting of any perceived corruption or other wrongdoing, and involve stakeholders in monitoring progress</td>
</tr>
</tbody>
</table>

For access to additional resources and information on this topic, please visit the handbook Web site at www.housingreconstruction.org.
Risks and Challenges

- No single competent government agency designated to manage assessments after the disaster; leaving it instead to individual agencies.
- Government overpromising in the early days after the disaster before sufficient information is available.
- Inaccuracies in the damage assessment caused by the lack of baseline data (original condition of infrastructure and housing) or inconsistencies of data from various sources.
- Proliferation of assessments and the resulting assessment fatigue among the affected population. False expectations being created in the assessed population.
- Failure of agencies to share assessment data.
- Inadequate assessment quality because assessors are not sufficiently trained.
- Local requirements not reflected because community or other local data are not incorporated in national assessments. Needs of vulnerable populations not highlighted in assessments.
- Owners who damage their own housing in order to qualify for housing assistance because the assessment of housing damages takes place after the assistance scheme is announced.
- Assessment data not objectively analyzed. Assessments carried out simply to justify agency decisions, not to inform them.
- Reconstruction policy that does not take sector investment plans and long-standing needs into account.
- Lack of stakeholder consultation in the process for establishing the reconstruction policy.

Recommendations

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.

Case Studies

2004 Indian Ocean Tsunami, Tamil Nadu, India

Tamil Nadu State Tsunami Reconstruction Policy

The 2004 Indian Ocean tsunami had a widespread impact on the fishing villages and towns along the coastline of Tamil Nadu, India. The state had never seen a calamity of this nature. More than 8,000 lives were lost and 1 million people were affected. Most of the 54,000 housing units affected were destroyed. More than 400 schools, health clinics, and other public buildings were destroyed and many more were damaged, as were roads and other infrastructure. The impact was spread over 13 districts and 350 towns or villages. The entire coastal economy of Tamil Nadu was affected.

The Tamil Nadu State Tsunami Reconstruction Policy addressed a wide range of issues, focusing particularly on the environment, livelihoods, and shelter, and included all the measures the government of Tamil Nadu was taking to bring the lives of the affected people back to normal. The responsibility

for managing reconstruction was assigned to a Project Implementation Unit within the Revenue Administration, Disaster Management, and Mitigation Department of the state government. Numerous state agencies and the federal government collaborated in the effort. The cost of rebuilding in Tamil Nadu was estimated at US$880 million. Of this, US$566 million was borrowed from IFIs.

**Assessment.** A questionnaire was developed by the state and administered by district officials to ascertain the number of affected families in each zone, the type of construction, the ownership of the structures, the number of family members, etc. The survey covered 278,000 families who lived within 1,000 meters of the coast. The survey included families whose houses were not damaged, but whose livelihoods had been affected by the tsunami. The survey results formed the basis of the choices before government in terms of the area, the average size of houses to be built, the general nature of construction, and the approximate cost. The survey showed that tenancy was an issue mainly in the urban areas, so a policy decision on this aspect of reconstruction was postponed until further input could be gathered.

**Housing sector policy.** Within two weeks of the tsunami, the Revenue Administration, Disaster Management, and Mitigation Department had issued a government order that announced a comprehensive village development model. The order promoted private participation in reconstruction, limiting the role of government to providing land, specifications for housing, and common amenities. The order included the parameters for the projects and solicited NGO proposals. Media advertisements were issued calling for support.

The specific policies established to guide reconstruction included extensive consultation with stakeholders, community choice on relocation decision, agency-driven reconstruction with NGOs providing resources and assisting communities, a strong role for district governments with support from the state, adherence to coastal zone regulations, safe rebuilding according to building codes and guidelines, and financial assistance for a core house with a choice of models.

**Disaster risk reduction.** Government acknowledged that most of the buildings damaged by the tsunami were built with construction practices that were not appropriate for the area, given the hazards it was exposed to. To mitigate future risks, the reconstruction policy for housing and infrastructure would strongly promote use of disaster-resistant technologies. The decision about whether the community would relocate was left to the community itself. Relocated communities were given free parcels of land in urban and rural areas.

**Assistance packages.** Assistance was provided by NGOs and was the same for all. The amount was sufficient to provide a core house and basic infrastructure. This approach was used both for equity purposes and because the property records would not have permitted a fair valuation of the property that was lost.

The state decided to adhere to the Coastal Regulatory Zone regulations under the Environment Protection Act, which regulate building activity up to 500 meters from the high tide line. The only exceptions were for fishers, who were allowed to stay if not willing to relocate beyond 200 meters, but who were not allowed to rebuild, only repair, their houses, and were not given housing assistance.

**Building codes.** The state relief commissioner’s office set up a committee of experts to study the National Building Code and the guidelines developed in Gujarat after the earthquake. They suggested modifications based on the windy conditions prevailing along the Tamil Nadu coast. These were used to develop the core house designs.

**Institutional arrangements.** While owner-driven construction was permitted, in the end, NGOs, donors, and government built most of the housing with a high level of community involvement. District governments were given responsibility for coordination of the reconstruction, with significant financial and technical support from the state. NGOs of various kinds were invited to provide reconstruction resources and to assist communities. In those cases where NGOs or corporations did not come forward, reconstruction was coordinated by district collectors and financed by government after organizing the families into self-help groups.

---
The government of Tamil Nadu committed itself to carrying out the following measures.

<table>
<thead>
<tr>
<th>Commitment</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Temporary shelters</td>
<td>Government provided a grant of Rs 8,000 (US$180) for temporary shelters to be built by government as well as by NGOs.</td>
</tr>
<tr>
<td>2. Core houses</td>
<td>Instead of adopting “compensation” as the basis for entitlement, a core house was provided irrespective of the size of the original house. NGOs were asked to spend an average of Rs 150,000 (US$3,500) for a house of 325 square feet, plus infrastructure and livelihood activities.</td>
</tr>
<tr>
<td>3. Building codes and guidelines</td>
<td>The state Public Works Department developed plans for the model core houses and made them widely available. Some were two floors.</td>
</tr>
<tr>
<td>4. NGO guidelines</td>
<td>The state provided district officials with guidelines to assess the genuineness of the NGOs operating in the post-disaster environment and a model format for a detailed memorandum of understanding (MOU) between the district and the NGOs. Several respected NGOs reviewed the draft MOU and proposed clarifications. Local officials could make minor changes to suit local conditions.</td>
</tr>
<tr>
<td>5. Land acquisition</td>
<td>The state provided funds to districts for land acquisition up to 200 percent of value in order to relocate owners from the coastal zone and other high-risk areas. There were no lawsuits by property owners. Land for relocated houses was provided by the state.</td>
</tr>
</tbody>
</table>

**Insurance and title.** The housing assistance included payment for 10 years of property insurance on the new houses. The ownership of the houses passed to both the husband and wife after construction was completed.

**Communications with stakeholders.** Several rounds of consultations were held by the districts with the community regarding the housing aspirations of the affected families, especially women. Five housing models were developed. When the original designs did not have a staircase, this was subsequently changed based on consultations.

The results of assessments, the names of assistance recipients, the reconstruction guidelines, and the housing reconstruction policy were widely publicized and made available on the Web sites of the districts and states.

**2001 Gujarat Earthquake, India**

**The Gujarat Earthquake Reconstruction and Rehabilitation Policy**

When an earthquake measuring 6.9 on the Richter Scale struck Gujarat, India, on January 26, 2001, and was followed by more than 500 aftershocks, the effect was devastating and somewhat unexpected, given the geological characteristics of the location where it struck. Approximately 13,800 people died and approximately 167,000 were injured. More than 1.2 million houses were damaged or destroyed and nearly all the civic facilities—schools, hospitals, health centers, and public buildings—were damaged, some extensively. The utility infrastructure, including water supply, electricity, and telecommunications, was completely disrupted.

The government of the state of Gujarat announced the Gujarat Earthquake Reconstruction and Rehabilitation Policy two months after the earthquake. The policy document, only 30 pages long, included the creation of the Gujarat State Disaster Management Authority. (It had actually been created in the month following the earthquake; the policy document formalized the entity). It proposed different reconstruction approach for urban and rural reconstruction and in different regions of the state, depending on their seismic zone. The cost of rebuilding was estimated at US$1.77 billion, of which more than half was to be borrowed from IFIs.

**Policy objectives.** The stated objectives of the policy included building, retrofitting, repairing, and strengthening houses and public buildings, and improving the earthquake resistance of what was rebuilt. Other objectives related to revival of the local economy, reconstruction of community and social infrastructure, health support to those affected by the earthquake, restoration of lifeline and major infrastructure, gender empowerment, social attention to the poor; implementation of a comprehensive disaster preparedness and management program, and the need for long-term mitigation of a variety of risks to which the population was exposed.

Guiding principles. Among the guiding principles of the policy were the need to involve people and representative institutions in decision making; the strengthening of civil society institutions; the importance of ensuring that the needs of the vulnerable were addressed; the necessity to give people information to make informed choices in rebuilding, including about disaster risk reduction; and the importance of involving the private sector, NGOs, and expert institutions in the reconstruction program. Lastly, it called for the highest levels of transparency and accountability in the reconstruction program through the use of appropriate institutional mechanisms and practices.

Housing sector policy. The housing sector was defined as encompassing debris removal, salvage, and recycling; construction of temporary shelters; reconstruction of more than 230,000 houses; repairs and strengthening of more than 1 million houses; and reconstruction and repairs of government staff quarters. The policy established that there would be a community-driven housing recovery process, under which earthquake-affected communities would be given a range of choices from complete or partial relocation to in-situ reconstruction. While acknowledging that there existed a predominant sentiment for minimal relocation, this policy gave communities the responsibility for deciding on their preferred option, using a participatory process. Selection of new sites would be undertaken with the support of village officials and the NGO or other agency assisting the village. Other aspects of the policy included:

- delegation of technical and financial powers for the housing reconstruction process to the district administration or Area Development Authorities;
- use of a community-based, owner-driven approach, with technical assistance from engineers provided by government, building centers, NGOs, etc.; and
- basing reconstruction on a tripartite partnership, including the government of Gujarat, the private sector (including NGOs), and the beneficiaries.

The government of Gujarat committed itself to carrying out the following measures.

<table>
<thead>
<tr>
<th>Commitment</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Removal of rubble</td>
<td>Included the commitment to environmental management and recycling to reduce construction costs</td>
</tr>
<tr>
<td>2. Setting up of temporary/interim shelters</td>
<td>Shelters for urban and rural homeless, provided through government agencies or NGOs, or provision of shelter material</td>
</tr>
<tr>
<td>3. Full reconstruction of collapsed and demolished houses</td>
<td>Provision of financial entitlement package adequate for core house, to which owners could contribute additional resources from their own resources or by borrowing</td>
</tr>
<tr>
<td>4. Repair of damaged units</td>
<td>Provision of financial entitlement package for repair</td>
</tr>
<tr>
<td>5. Retrofitting of undamaged units</td>
<td>Technical assistance to owners or cooperatives wanting to retrofit their properties for earthquake or cyclone resistance</td>
</tr>
<tr>
<td>6. Rebuilding of social and community infrastructure</td>
<td>Reconstruction of minimum infrastructure for each village, including primary school, water storage, roads, electricity, and building of infrastructure at relocated site and repair/retrofit for in-situ reconstruction</td>
</tr>
</tbody>
</table>

Assistance packages. The government of Gujarat announced five packages of assistance for reconstruction, retrofitting, and repairs of approximately a million houses destroyed or damaged in the earthquake. The amounts varied depending on the type of house, the extent of damages, and the location.

- **Package 1**: For villages in seismic Zones IV and V, where more than 50 percent of the houses collapsed
- **Package 2**: For villages in Zones IV and V, which opted for in-situ reconstruction
- **Package 3**: Villages situated in areas other than Zones IV and V, where individual houses were destroyed or damaged
- **Package 4-A**: Reinforced cement concrete frame structures (low- and high-rise) in urban areas, which include municipal corporations, urban development authority areas, and other municipalities (excluding Bhuj, Bhachau, Rapar, and Anjar in the Kutch District)
- **Package 4-B**: Load-bearing structures in corporation areas, urban development authority areas, and municipalities (except Bhuj, Bhachau, Rapar, and Anjar in the Kutch District)
- **Package 5**: Rehabilitation in the four worst affected municipal towns of Bhuj, Anjar, Bhachau, and Rapar in the district of Kutch, with a stress on urban town planning
**Urban rehabilitation.** In Kutch, four towns—Bhuj, Bhachau, Anjar, and Rapar—suffered large-scale devastation. The collapse of a large number of multistory buildings and the limited availability of land in these towns called for a different strategy for rehabilitation. Congested inner towns were redeveloped, and the residents were given the option of relocation. A number of residents living in multistory buildings were asked to construct houses on new plots, in view of new town planning rules, development regulations, and a reduced floor space index.

A number of public buildings were also proposed for relocation. The urban infrastructure was to be expanded and upgraded. Construction in these towns was owner-driven. Government facilitated the process by providing technical guidance, material specifications, and technical supervision for building earthquake-resistant buildings. See the case study on the planning process for the redevelopment of Bhuj in Chapter 7, Land Use and Physical Planning.

**Resources**


Having a coherent understanding of an affected region’s pre-disaster housing and community development system and the likely impact of a disaster on this system is often essential for developing an effective post-disaster housing and community reconstruction strategy or for diagnosing what is going wrong if reconstruction has begun and local actors are not satisfied with the results. Local development, housing, and land tenure issues that emerge in the aftermath of a disaster are often not new, but the disaster will exacerbate the weaknesses in the system, especially when there are challenges such as widespread poverty, extensive informality in the housing system, or a large number of housing units that need to be reconstructed.

**When to Conduct a Housing Sector Assessment**

A housing sector assessment should be carried out during the first few weeks after a disaster in parallel with other assessments and should be used in the formulation of the overall reconstruction policy and longer-term housing sector reform. The importance of a housing sector and land tenure analysis may not be recognized early on, as people assume that the recovery process will not conform to “normal” processes, but instead will be carried out using a series of “special” arrangements. However, this is seldom the best or most sustainable reconstruction approach. The focused, humanitarian period of post-disaster reconstruction rarely runs long enough, or provides sufficient resources, for full recovery. As a result, the reconstruction process should be able to “run itself” after the formal reconstruction period is over. A more sustainable approach is one that improves on—but is still based on—normal reconstruction practices in the country. Such a strategy also mobilizes local actors, such as small-scale builders, and gives them training and livelihood opportunities. During this time, they can be enlisted in improving longer-term construction practices. Therefore, helping government gain the insight on how prior practices led to the disaster outcomes, and how they can be improved, can stimulate efforts to improve “normal” housing construction policies, procedures, and conditions.

**Critical Elements of the Housing Sector**

The critical elements of the process by which housing and communities are constructed and reconstructed are considered to be the following: (1) local governance, (2) land administration, (3) housing construction system and practices, (4) housing finance, and (5) local infrastructure construction and operation. While this guidance puts relatively equal emphasis on all of these elements, one or more of them may need to be emphasized in the assessment, depending on the prior conditions in the country.

**Objectives of a Housing Sector Assessment**

The general objective of the assessment is to assist government at all levels to improve the quality of outcomes from the response in the area of housing and community reconstruction. The assessment will increase the awareness of the agencies involved with reconstruction of the strengths and weaknesses in the local housing sector and land administration systems and show how they may affect recovery, while providing specific recommendations on short- and medium-term actions to be taken to improve the effectiveness of reconstruction program implementation that will contribute longer-term strengthening of the housing sector and improvements in the quality of the housing that is reconstructed.

The specific objectives of the assessment include the following:

A. Provide a comprehensive analysis of the country’s policy and institutional frameworks for the housing sector and the land administration system, with particular emphasis on:
   - the adequacy of these frameworks under normal conditions and their ability to be adapted to the demands of the post-disaster housing reconstruction process;
   - the implications of any relevant policies announced since the disaster;
   - the capacity of the organizations involved in the housing reconstruction; and
   - the specific challenges that have already arisen, or may be expected to emerge, as the post-disaster housing reconstruction program is planned and executed.

B. Provide concrete and specific recommendations on how to improve the response to the disaster in such areas as: policy modifications, institutional roles and responsibilities, coordination mechanisms, and needs for institutional strengthening, including capacity-building activities, financial strategies, or other areas.

**Methodology for a Housing Sector Assessment**

The assessment should focus on the policy and institutional frameworks for housing and community reconstruction. It is not intended to be a housing damage assessment, although the extent and nature of the damage may affect the recommendations, so this data should be analyzed and taken into consideration in the assessment. Similarly, while the principal area of concern is the reconstruction of permanent housing solutions for the affected population, not temporary shelter solutions, the two cannot be analyzed in isolation. Therefore, the consistency between the temporary housing strategy (if any) and the permanent reconstruction strategy should be analyzed.

Housing reconstruction takes place on a very local and even personal basis. The concerns and perspectives of local actors should have a strong influence on the reconstruction approach.
The consultants should use a variety of data collection methods to capture different types of information and social perspectives, and it should have a bias toward capturing the perspective of households, local government officials, and other local actors. A reconstruction approach not based on local reality, and not seen as workable at the local level, is unlikely to succeed. For that reason, it is suggested that the consultants reside in the disaster area while conducting the assessment.

Expertise Required
Specialists should be hired to carry out this assessment, due to the complexity of the issues and the need to organize and interpret a wide range of information. The specific expertise may vary, depending on the disaster situation. In general, a team of 5–7 people will be required to carry out this assessment in a timely manner. The team should include members with expertise in housing policy, housing finance, post-disaster reconstruction, local government administration, and local service provision. The team leader should have post-disaster housing reconstruction experience. One member should be responsible for handling poverty and social safeguards issues, including the analysis of social policies related to housing provision for low-income and vulnerable populations and the differential effects of the disaster and the reconstruction policies being proposed.

A counterpart in government who understands the policy issues related to the work and who can facilitate contacts and access to information must be appointed. Ideally, this person is supported by a technical committee that includes representation from the affected population.

Scope of a Housing Sector Assessment

<table>
<thead>
<tr>
<th>Topic</th>
<th>Issues</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Overview of the disaster and disaster zone</td>
<td></td>
</tr>
<tr>
<td>1.</td>
<td>Present a list of the disaster-affected zones identified by local government jurisdiction.</td>
</tr>
<tr>
<td>2.</td>
<td>Analyze the socioeconomic characteristics of the affected area, including income levels, economic base, quality of major and basic infrastructure.</td>
</tr>
<tr>
<td>3.</td>
<td>Provide data for the disaster zones on distribution and type of housing and infrastructure damage, and numbers of housing units and population affected, by income level and other relevant social characteristics.</td>
</tr>
<tr>
<td>4.</td>
<td>Provide maps of the disaster zones showing distribution of affected infrastructure, housing units, and population.</td>
</tr>
<tr>
<td>5.</td>
<td>Analyze and describe the legal and institutional framework that defines the roles and responsibilities of the relevant agencies in reconstruction. Describe the lead agency responsible for reconstruction and any specific tasks identified for it related to local reconstruction. Include in an annex any relevant degrees, policy statements, announcements, etc.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>B. Policy frameworks and organizational arrangements</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>General</td>
<td></td>
</tr>
<tr>
<td>1.</td>
<td>With particular emphasis in the zone affected by the disaster, provide an overview of the roles and responsibilities of central, local, and any intermediate levels of government; the state of both operational and fiscal decentralization in the country; and the normal mechanisms for fiscal mobilization and distribution.</td>
</tr>
<tr>
<td>2.</td>
<td>Describe the pre-disaster situation of the municipalities, including information on financial, human, and technical capacities.</td>
</tr>
<tr>
<td>3.</td>
<td>Provide information on losses and damages of the municipality caused by the disaster, the functioning of the municipality after the disaster, and coping strategies.</td>
</tr>
<tr>
<td>4.</td>
<td>Based on the roles and responsibilities defined in the legal framework, analyze the capacity and magnitude of local government to comply with its obligations.</td>
</tr>
</tbody>
</table>

Sources of Information

1. **Documentation.** Previous studies of the housing sector should be reviewed and may serve as the starting point for this assessment. Key documentation includes, among others things, at the national level, disaster damage, loss, and needs assessments; pronouncements and policies related to the disaster; laws and other material related to the legal framework for housing and land; and national policy documents; and, at the local level, local damage, loss, and needs assessments; registers of affected persons; policy documents; land use plans and policies and related ordinances; capital investment plans; and procedures related to building permitting and inspection.

2. **Interviews.** National and regional government officials (including representatives from appropriate ministries); municipal authorities (mayor, technical experts, public service organizations, counsel members); social leaders and social movement representatives; the affected population and their representatives; locally active international organizations; civil society organizations and NGOs; academic institutions; and representatives of the private sector.

3. **Observations.** Time should be dedicated to observations in the field and to taking testimony from unofficial actors, both of which can reveal needs and problems that might otherwise be overlooked.

4. **Other.** Collect and provide photographs and other documentation that contribute to illustrating the principal findings and/or supporting the conclusions of the assessment.
<table>
<thead>
<tr>
<th>Topic</th>
<th>Issues</th>
</tr>
</thead>
<tbody>
<tr>
<td>Land use planning</td>
<td>5. Summarize the principal elements of land use policy, particularly with respect to planning; land use regulation; subdivision of land; risk management; and the roles of the central, regional, and local governments.</td>
</tr>
<tr>
<td></td>
<td>6. Describe the framework for disaster risk management (DRM) as it applies to land use planning and regulation, and the effectiveness of its implementation.</td>
</tr>
<tr>
<td></td>
<td>7. Identify specific land use issues caused by the disaster, including the need for relocation of housing or infrastructure.</td>
</tr>
<tr>
<td>Housing sector</td>
<td>8. Summarize the principal elements of housing sector policy, particularly with respect to housing construction and financing; and the roles of the central, regional, and local governments.</td>
</tr>
<tr>
<td></td>
<td>9. Analyze government policy concerning the provision of housing to low-income and vulnerable populations, including any subsidy programs or direct provision efforts that might be relevant to the reconstruction process.</td>
</tr>
<tr>
<td></td>
<td>10. Analyze and show graphically the normal process for land development and for both single- and multi-family housing construction, identifying common bottlenecks.</td>
</tr>
<tr>
<td></td>
<td>11. Describe the procedures for approving and issuing building permits for housing construction and improvement, especially as it relates to housing quality and DRM in housing design, materials, siting, etc., and the effectiveness of its implementation.</td>
</tr>
<tr>
<td></td>
<td>12. Analyze the engineering and non-engineered construction practices normally used in housing in the disaster zone, the practices for contracting construction, and the capacity of the construction industry.</td>
</tr>
<tr>
<td>Local infrastructure</td>
<td>13. Summarize the principal elements of policies that govern the provision of basic local infrastructure, particularly with respect to operations and financing (both capital and operational), and the roles of the central, regional, and local governments or other entities.</td>
</tr>
<tr>
<td></td>
<td>14. Analyze the requirements and/or any programs already contemplated for post-disaster infrastructure reconstruction and the suitability of these programs for the reconstruction of local infrastructure in the communities affected by the disaster, for both in-situ reconstruction and relocated housing.</td>
</tr>
<tr>
<td>Land ownership and tenure</td>
<td>15. Summarize the principal elements of policies that govern the provision and ownership of land; especially with regard to the state of the private market; the formal and informal institutional arrangements for sale, titling, registry, and inheritance of land; and the roles of the central, regional, and local governments or other entities.</td>
</tr>
<tr>
<td></td>
<td>16. Provide a typology of the official legal land tenure options in the country.</td>
</tr>
<tr>
<td></td>
<td>17. Describe particular local socio-cultural customs regarding land ownership and titling and any problems with land ownership and tenure commonly experienced before the disaster.</td>
</tr>
<tr>
<td></td>
<td>18. Analyze the impact of the disaster on these problems and any additional land tenure problems that have emerged since the disaster. This analysis in this and the prior item should cover problems related to the following issues: collective ownership; legal and illegal possession of private land; occupation of public land; tenancy, including problems related to inheritance and death from the disaster; land titling; land registration; loss of land from the disaster; rural versus urban land; and proof of ownership, including loss of records at the household or municipal level, among others.</td>
</tr>
<tr>
<td>Housing finance</td>
<td>19. Analyze and describe the systems used to finance housing construction by different social classes and for both single- and multi-family housing and identify the impact of the disaster on this system. Include the use of property insurance if a system exists in the country.</td>
</tr>
<tr>
<td></td>
<td>20. Describe and analyze any financial assistance strategies announced or being contemplated by government to facilitate post-disaster housing reconstruction. Analyze the effectiveness of the strategies and their likely differential impact by type of housing, social class, or other relevant factor.</td>
</tr>
</tbody>
</table>

C. Post-disaster reconstruction process

1. Present a chronological summary of the concrete steps that have been taken to provide temporary or transitional shelter and/or to mitigate the housing-related impacts of the disaster on the affected population, identifying the agency responsible and the source of funding. |
2. Describe the coordination mechanisms established between the central, regional, and local governments to organize the reconstruction program or to address land tenure issues. |
3. Analyze intermunicipal linkages and describe collaboration among different municipalities, noting whether these bonds existed before the disaster or were created as a response to it. |
4. Summarize the role of NGOs in the shelter sector and their anticipated role in reconstruction. |
5. Describe any financial strategy for housing and community reconstruction announced at the national or local level and analyze its implementation to date.
Presentation of Findings and Recommendations

For each topic above, the consultants should provide a systematic summary of their findings and corresponding short- and medium-term recommendations that will improve the outcomes of the housing reconstruction program. The recommendations should be grouped in the way that the consultants believe will make them the most understandable during the review process and, in the final report, most useful for implementation. Once subject to an initial review, the recommendations should be presented in the final report as a work plan that identifies both the sequence of activities and the party or parties responsible for carrying them out. The work plan should include an initial budget for the implementation of the activities recommended.

The work plan and budget form the basis of an ongoing dialogue between government and the organizations that are providing financial support to the reconstruction program.

Expected Results and Outputs

The principal output is an in-depth housing sector and land tenure assessment for the disaster-affected area that contributes to a comprehensive understanding of strengths and limitations that are likely to influence the post-disaster housing reconstruction process, accompanied by related recommendations regarding policy and operational reforms that should be implemented in the short and medium term. In the initial report, the consultants will present their strategy, plan, and schedule for the consultancy. The assessment should be presented in draft and final forms.

Time will be of the essence in carrying out this assessment. The following schedule allows the consultancy to be completed in approximately two months. The following time intervals are ambitious, but can be adjusted, depending on the particular situation. Outputs will include:

- an initial report, within 7 days of the contract, in which the consultants present any recommendations for modification of the scope of work as well as a work plan and schedule for the presentation of outputs;
- a draft report, presented within approximately 21 days of the acceptance of the initial report; and
- a final report, presented within the earlier of 21 days of the receipt of comments on the draft report from the party or parties responsible for overseeing the assessment or 30 days of the presentation of the draft report.

The draft and final reports should be presented along with an executive summary or abbreviated version that can be widely circulated, in a language and format easily understandable by stakeholders.

An effective review process will help guarantee the success of the consultancy, and the consultants should take an active role in carrying it out, with assistance from government and the sponsor of the consultancy. This may entail various meetings with government, community, and other stakeholders; use of information technology; or other means to ensure wide distribution of the draft report and collection of feedback. Meetings may also be required once the report is finalized to more widely disseminate the findings and recommendations.

Annex 1 Endnote

1. The assessment methodology proposed here is based on Land Ownership and Housing, Final Report (Informe Final, Tenencia de la Tierra y la Vivienda), conducted in Peru to analyze the effect of the Ica/Pisco earthquake in 2008 by Centro de Estudios y Promoción del Desarrollo, under the supervision of UN-HABITAT and in collaboration with the Department for International Development and the Ministry of Housing, Construction and Sanitation.

For access to additional resources and information on this topic, please visit the handbook Web site at www.housingreconstruction.org.
A housing damage assessment is the necessary first step that leads to the eventual reoccupancy of buildings and that supports decisions about providing other housing solutions after a disaster. The assessment process is made up of a predictable set of activities, and procedures for a number of them can be established ahead of the disaster in order to speed up the initiation of the post-disaster housing damage assessment process.

Beside demonstrating to citizens that the recovery period is beginning, housing inspections serve other purposes, including (1) **public safety**: identify whether houses can be fully or partially occupied, or must be vacated until reconstruction takes place (generally the result of a separate housing safety inspection; see box, below); (2) **planning**: use the results to quantify the funds, time, and other resources required for recovery, particularly when damage to housing makes up a large component of reconstruction; (3) **technical**: provide information about the specific types of damage that have been sustained and therefore the types of technical interventions, technical expertise, and training that will be required in reconstruction; and (4) **economic and social**: provide data on the impacts of the disaster at the household level.

Developing an appropriate methodology for housing damage assessment is one of the most critical aspects of the post-disaster response. The process must be made transparent and participatory to establish trust with the affected community and to ensure that local knowledge is fully incorporated. It should contribute to disaster risk reduction (DRR), social inclusion, and gender neutrality. The tools should be tailored to local conditions and be designed to ensure reliability and accessibility by the affected population for both collection and review of data. The approach described here also has the benefit of providing a view of the situation from various perspectives. While the content and sophistication of the assessment tools will vary from one disaster to another, it is recommended that all of the following tools be employed in most cases.

### Housing Damage Assessment Tools

<table>
<thead>
<tr>
<th>Tool</th>
<th>How the tool is applied</th>
<th>Output</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Initial reconnaissance walk</td>
<td>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. <strong>Who does it? Assessors with engineers, local officials, and community members.</strong></td>
<td>Initial impression of types and extent of damage.</td>
</tr>
<tr>
<td>2. Habitat mapping²</td>
<td>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 cadastral or the civil registry database. One mapping technology can also be used to validate another (artisanal mapping against the cadastral or GIS data). In a community with caste or other social distinctions, this activity can be conducted by sector and aggregated later. <strong>Who does it? Trained assessors, some of whom may be local officials and/or community members.</strong></td>
<td>Visual representation of location of damaged and undamaged houses and initial damage categories. List of properties, addresses, and relation to built environment.</td>
</tr>
<tr>
<td>3. Village transect³</td>
<td>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. <strong>Who does it? Trained assessors together with community members.</strong></td>
<td>Site-specific data and relation of damage to environmental features and land uses.</td>
</tr>
<tr>
<td>Tool</td>
<td>How the tool is applied</td>
<td>Output</td>
</tr>
<tr>
<td>------</td>
<td>-------------------------</td>
<td>--------</td>
</tr>
<tr>
<td>4. Household-level survey</td>
<td>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. Several examples of standardized short and long forms are available. 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. <strong>Who does it?</strong> Trained assessors (chartered surveyors, engineers or architects) together with local officials and/or designated community members.</td>
<td>Detailed property and household data.</td>
</tr>
<tr>
<td>5. Photographic documentation</td>
<td>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. <strong>Who does it?</strong> Photographers trained in the documentation process (can be local).</td>
<td>Visual documentation of damage at the household level.</td>
</tr>
<tr>
<td>6. System to number, classify, and label buildings</td>
<td>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. <strong>Who designs it?</strong> Local officials with community input. Develop the classification system 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. <strong>Who designs it?</strong> Engineers/building surveyors with local input.</td>
<td>Universe of numbered and classified houses.</td>
</tr>
</tbody>
</table>

### Building Safety Inspections

Building safety inspections are a public safety measure that is taken very soon after a disaster, to reduce the risk of death and injury to users, residents, and passersby due to building collapse, falling interior or exterior materials and equipment, or other unsafe conditions. They are more necessary in urban contexts where population is dense and buildings have multiple stories.

A placard is commonly affixed to each house once it has been inspected. The placard shows that the house has been surveyed and warns residents and others if there are limitations on its use. A common labeling system uses green/yellow/red placards corresponding to the level of risk. The use of local language and/or visuals will be necessary in contexts where illiteracy or multiple languages are found. Public officials or private sector volunteers (engineers, inspectors) may carry out the inspections, but, as in the case of damage assessments, inspectors should be sufficiently trained to produce predictable results.

Safety inspections are provisional and are not meant to provide information about the value of the damage or the building’s potential for being repaired. This information is gained during the housing damage assessment and/or later engineering studies.

---

**ATC-20/45 Post-Disaster Building Placards**

Next Steps

It is important that the data collected via the assessment process be properly validated from secondary sources, including through consultation with the residents and owners. Given its potential value, the data should be entrusted to professionals in data management to ensure that their reliability and safety are preserved. (Remember that because this data will form the basis of assistance schemes, there may be incentives to access and manipulate it, especially once the assistance scheme is announced.)

Depending on the construction technology in the area, engineering and architectural expertise will likely be needed to translate the assessment data into estimates of time and materials required to carry out at least minimum safety repairs. In addition to repairs, the program may cover retrofitting of buildings at risk of future damage. This work should be specified and the costs estimated as well.

Numerous critical activities can be initiated once the housing assessment has been conducted, the results analyzed, recommended DRM measures identified, and cost estimates made. These include, among others:

- decisions regarding the reconstruction approach that government will promote, and the need for relocation and for transitional shelter options to be provided;
- design of the financial assistance strategy;
- determination of technical assistance requirements for builders;
- design of the training program for builders and construction inspectors; and
- design of the communications plan related to the assistance program and DRR measures.

Chapter 16, Training Requirements in Reconstruction, explains how housing damage assessment data are used in developing training for builders.

The housing assessment process does not necessarily eliminate the need for individual homeowners to hire engineers, contractors, or both to provide specifications and cost estimates for their specific reconstruction projects, particularly for engineered buildings.

Preparing for the Next Disaster

In anticipation of a future disaster, central and local governments can establish many of the tools used in the housing damage assessment and safety inspection processes, including mapping and assessment methodologies, design of survey instruments, design and printing of placards, procedures and systems for the management of statistical and photographic databases, and a reconstruction monitoring system.

Annex 2 Endnotes


2. Common participatory appraisal methods can be applied in carrying out this activity.

3. A transect is a line following a route along which a survey is conducted or observations are made. A transect is used to analyze changes in human and/or physical characteristics from one place to another. An urban transect usually follows one or more streets and will show changes in land use; the nature of buildings, such as houses and shops; or features such as schools, churches, community centers, and parks. A rural transect might follow a road, a section line, or a stream, and may show the kinds of crops in adjoining fields, farm buildings, vegetation, or changing features along a riverbank. For an explanation of the use of the transect in urban planning and zoning, see http://www.newurbannews.com/transect.html.


6. See Chapter 9, Housing Design and Construction Technology, for a discussion of damage categories.