

Participatory Planning Guide for Post-Disaster Reconstruction

prepared by

EPC-Environmental Planning Collaborative, Ahmedabad, India

and

TCG International, LLC, Washington, DC

with the support of

USAID/India

and the

**Indo-US Financial Institutions Reform and Expansion (FIRE-D)
Project**

January 2004

Table of Contents

I. Understanding Disasters and Their Impact	1
II. Assessing Damage and Needs for Reconstruction	3
III. Formulating Policies	6
IV. Formulating Participatory Reconstruction Plans	9
V. Establishing the Management Framework for Reconstruction.....	13
VI. Managing Information	17
VII. Case Study: Bhadreswar Village	20
VIII. Case Study: Bhuj	22

I. Understanding Disasters and Their Impact

The Nature of Disasters

When a disaster strikes, individuals and communities are affected in ways that seriously disrupt their normal functioning. The disaster causes widespread human, material, and/or environmental losses, which exceed the ability of these individuals and communities to cope using only their own resources.

Disasters were once thought of exclusively as natural events such as floods, cyclones, or earthquakes. However, the definition has broadened in recent years to include such “man-made” events as industrial accidents (e.g., the Bhopal gas leak), technological accidents (e.g., the Chernobyl nuclear disaster), and even war and civil conflict. What is common among them is the significant damage they cause to society. To give a contrasting example, a massive earthquake in an unpopulated area is *not* a disaster, but can only be considered a natural event or phenomenon of scientific interest. *Neither* is an earthquake that strikes an area where housing and infrastructure were built to earthquake-resistant standards, causing no loss of life nor damage to property.

Disasters are classified not only according to their cause (i.e., natural or man-made), but also according to their speed of onset or, simply, how rapidly they begin (that is, sudden-onset or slow-onset). Thus, such disasters as earthquakes, cyclones, and floods are considered sudden-onset disasters, whereas droughts, famine, and civil wars are slow-onset disasters.

Among natural disasters, perhaps what can be most devastating are earthquakes, which often strike with no early warning. Earthquakes are measured according to the Richter scale. The most destructive effects are seen on level 6 and above of this scale, if the epicenter of the earthquake is located in highly populated areas. Such an earthquake can cause high numbers of deaths and injuries, as well as massive destruction of buildings and infrastructure.¹

¹ *It is important to bear in mind that the earthquake per se may not be the main cause of the large-scale devastation. More often than not, the significant loss of lives is a result of the collapse of weak housing and buildings, a consequence that is now avoidable with earthquake-resistant construction techniques.*

Sectors Affected

A disaster, such as an earthquake, often leaves in its wake a number of tangible losses as a result of the often massive destruction that it has wrought (see Box 1). Broadly, such losses include:

- Loss of lives. Death tolls may vary, depending on the magnitude of the disaster, but disasters invariably cost lives.
- Loss of or damage to buildings: houses, hospitals, schools, markets, offices, etc.

Box 1: The Gujarat Earthquake

On January 26, 2001, a devastating earthquake struck western and central Gujarat. It was the worst earthquake recorded in India, measuring 6.9 on the Richter scale. In the wake of the disaster, nearly 14,000 people died and 167,000 were injured. More than 1.2 million homes were extensively damaged or destroyed. So were civic facilities (schools, health clinics, and public buildings) and utilities (electricity, water supply, and telecommunications). The substantial loss of life, injury, and damage to property and infrastructure dealt a big blow to the otherwise prosperous state of Gujarat.

While almost the entire state felt the effects of the earthquake, the most severely affected were the districts of Kutch, Surendranagar, Rajkot, Jamnagar, and Patan. Of these, the hardest hit was Kutch, the largest district of Gujarat where nearly 1.26 million people lived. Kutch bore over 90 percent of all deaths and 85 percent of all asset losses. Almost all of its 940 villages and its four major towns — Bhuj, Anjar, Bhachau and Rapar — suffered massive destruction (see Appendix 2).

The effects of the earthquake on Gujarat’s economy have been significant. Damage to plants, factories, and machineries caused over 10,000 small industrial units to stop production. Thousands of salt pans and refineries as well as agricultural assets were destroyed. A large number of handicraft artisans lost their workshops and tools. There was a heavy loss of livestock, which is one of Kutch’s important livelihood sources.

The sectors that were hardest hit were housing, the service sector, and education. Overall, the damage caused by the earthquake was estimated at \$845 million.

- Loss of or damage to infrastructure: electricity, telecommunications, roads, water supply and sewerage systems, ports, airports, etc.
- Economic losses: crops, land, livestock, fisheries, factories, workshops, warehouses, storage facilities, etc.
- Cultural losses: cultural and historic buildings and sites, places of worship, etc.
- Psychological losses, i.e., trauma and other mental and emotional stress, physical injuries, etc.
- Social losses: disruptions in social services, law and order issues, adverse effects on family and/or community morale, etc.

Understanding the type and scale of losses and damages brought about by a disaster is critical to determining the kind and level of inputs required for reconstruction. A more in-depth understanding of damages and losses following a disaster can be provided by disaster assessments.

II. Assessing Damage and Needs for Reconstruction

Disaster assessment refers to the survey and information collection activities carried out to determine the effects of a disaster on the affected population, and their resulting needs. The assessment process is usually conducted at two distinct stages of a disaster:

- Immediately after a disaster, a *preliminary assessment* (sometimes called *rapid assessment* or *situation assessment*) is conducted to obtain an early but full assessment of the geographical extent of damage, and the number, categories, location, and circumstances of the disaster-affected population. This assessment provides a general picture of where people are, what condition they are in, what they are doing, what their needs and resources are, and what services are still available to them. It usually takes the form of an initial reconnaissance that can guide search-and-rescue and relief operations. Preliminary thematic maps that locate affected or damaged sites and infrastructure can then be produced from the results of this assessment (see Box 2).

As needs change day by day in the immediate aftermath of a disaster (i.e., first, for rescue equipment, excavators and medical equipment, then food, medicine, clothing, and shelter), a series of rapid assessments may be needed. Their results provide valuable baseline data and a basis for monitoring the post-disaster situation to determine whether it is improving or deteriorating over time.

- At a later stage, a more *detailed assessment* is done to collect more specific information about the nature, location, and extent of losses and damages, and the resulting needs of the affected populations. The more specific information collected from this assessment are useful for planning and implementing reconstruction programs.

Types of Disaster Assessment

For the recovery and reconstruction phase of a disaster, two types of detailed disaster assessment are most relevant:

- **Damage Assessment** collects the following types of information which are most valuable for the purpose of reconstruction planning.

- damage to housing and buildings
- damage to livelihood (e.g., shops of small traders, salt pans, industrial units)
- damage to agriculture and animal husbandry (crops, fruit trees, livestock)
- damage to services (educational, health, recreational facilities) and government buildings
- damage to infrastructure and utilities (water supply, sewerage, roads, bridges, electricity, telecommunications, etc.)

In each of the above, specialists in each sector determine the damage. Structural or civil engineers, for example, examine the damage to housing, commercial and public buildings, physical infrastructure, utilities, etc. Agronomists and agricultural specialists determine losses to crops and forests, among others, and economists determine damages to the local economy. While damage assessment is usually the work of sector specialists, it is essential that the disaster-affected families participate in damage assessment surveys involving their housing units, as discussed below.

- **Needs Assessment** determines the level and types of assistance required by the affected population, their priorities, and their preferred strategies to meet these priorities. Common needs include: housing needs, livelihood needs, personal needs (of the injured, handicapped, orphaned, those suffering from disaster-caused trauma), and needs for services (water supply and sanitation, electricity, schools, health centers, etc.). The information collected from this assessment help in identifying and prioritizing needs that lead to appropriate types of assistance and inputs for reconstruction in the medium and long term.

Disaster Assessment Methodology

- **Technical evaluation of structural damage.** The objective of this assessment is to determine the precise nature and extent of damage to all buildings in disaster-affected areas, using pre-defined categories in which to classify structural damage. Different categories represent different degrees of damage. Judgments concerning damage categories are made on the basis of direct onsite visual evaluation of building exteriors,

taking into account damage to the foundation, load-bearing walls, ceilings, or roofs of the structure. This is usually conducted through a street-by-street house-by-house survey in the disaster-affected area. *It is essential that the surveyor/assessor consult with each affected family during this assessment to develop a reasonable consensus on the method and basis for classifying the affected housing unit under a given damage category.* It is also important for the surveyor/assessor to evaluate every structure within the area, even if the structure is not affected. This ensures that isolated undamaged homes are identified and recorded, and also helps pinpoint the specific cause of damage to those that are affected.

The information obtained from this assessment provides the basis for the level of housing assistance

Box 2: Damage and Needs Assessment in Kutch District, Gujarat

In the aftermath of the Gujarat earthquake, demands for information started to pour in from a multitude of public and private entities at different levels with a sense of urgency to offer assistance. The need was made clearer as several of these groups started to conduct their own damage assessment on which to base their relief operations. These had resulted in many communities getting assessed repeatedly and receiving relief materials several times over, causing confusion and waste of resources.

To meet the mounting information needs in a timely manner and to coordinate information gathering activities, EPC and Abhiyan jointly took on the task of developing an information management system for Kutch. The Abhiyan Information Center designed a formatted checklist to be used for the damage assessment survey in five severely affected *talukas* — Bhuj, Bhachau, Anjar, Rapar, and Mundra. It was the first comprehensive rapid damage assessment survey carried out in the region in collaboration with the Tata Institute of Social Sciences (TISS) and the Gujarat Institute of Development Research (GIDR). EPC's GIS specialists processed the collected data to generate maps showing the extent and location of damage following the earthquake.

The information collected and the maps produced were distributed to the district authorities and international organizations involved in relief and recovery operations, including the UNDP, WHO, Save the Children Federation, etc.

Source: EPC, Guide for Planned and Participatory Reconstruction, October 2001.

allocated to affected families. The latter should be informed of the damage assessment results as soon as possible, providing clear interpretation of the assessment findings and its financial assistance implications.

Inventory of Affected Assets. This involves a detailed survey of all losses that resulted from the disaster, taking into account loss of assets and income. Important inventory categories include such assets as shops, workshops or worksheds, stalls, tools/equipment, livestock, etc. When compiling these inventories, the owners/household heads may be required to countersign them to minimize the possibility of subsequent claims or disputes regarding claims. It is on the basis of this assessment that special financial provisions are given to the affected people.

Sample survey. This involves more detailed surveys relying on interviews of a sample of the affected population and on collecting statistical information on the affected population. Generally, sample surveys are used for needs assessment, on the basis of which appropriate types of assistance and interventions are determined.

There are several different types of sampling techniques that can be used for conducting needs assessment:

- simple random sampling. Every member of the target population is equally likely to be selected, and the selection of a particular member of the target population has no effect on the other selection;
- systematic random sampling. Every fifth or tenth member on a numbered list is chosen;
- stratified random sampling. The population is divided into categories; members from each category are then selected by simple or systematic random sampling; then combined to give an overall sample; and,
- cluster sampling. The sample is restricted to a limited number of geographical areas (“clusters”); for each of the clusters chosen, a sample is selected by simple or random sampling. Subsamples are then combined to get an overall sample.

Assessment Tools

- **Checklists** or **Worksheets** are the most common and perhaps the easiest tool used in disaster assessment. A checklist or worksheet is simply an abbreviated list that provides the assessor with a comprehensive, yet flexible guide to the types of information needed to be collected. It is usually a form structured and formatted in such a way that surveyors can easily remember key points and ask certain questions to fill it out. It is essential that the format of the checklist is standardized and is as simple as possible to facilitate the process of analysis and collation. Likewise there should be common understanding of the terminology used and consistency in spelling names, e.g., of the affected villages or towns to avoid confusion and ensure that the information collected can be presented in a way that is most helpful to the users. Formatted checklists are normally used for damage assessments.
- Questionnaires are most commonly used in needs assessments. A questionnaire is simply a list of questions used for interviewing the total affected population targeted for the assessment survey, or a sample of this population. The individual being interviewed can answer the questions orally or in writing. Questionnaires are useful for obtaining detailed information about the needs of the affected families and other vital statistical information about their post-disaster condition. Its tabulated results can facilitate a good analysis of the impact of a disaster at the individual and family level. Questionnaires are a more useful method for obtaining specific, detailed information for planning purposes, but are not a good tool for rapid assessments in the immediate aftermath of the disaster.

III. Formulating Policies

The ultimate goal of post-disaster reconstruction is to attain a standard of living that is even better than what existed before the disaster. It is towards this goal that policies are developed to govern decisions and actions taken by all those involved in reconstruction. In setting these policies, governments often refer to several *guiding principles*, which worldwide post-disaster experiences suggest are key to successful reconstruction. These include:

- **Self-reliance.** The primary resource that can be tapped for post-disaster reconstruction is the grassroots motivation of the affected individuals, their friends, and families. Assisting groups can help, but they must avoid duplicating, replacing, or stifling any action best taken by the affected population themselves. Emphasis should therefore be given to supporting and maintaining the dignity and self-reliance of the disaster-affected population. Before providing outside support, it is vital for assisting groups² to check whether locally available expertise, labor, and products are available within the communities. It is preferable to use these resources rather than import skills and materials from outside. This helps strengthen local capacity for reconstruction.
- **Decentralization and Empowerment.** Reconstruction is most effective when conducted at the local level. There should be mechanisms that allow the affected population to determine, plan for, and respond to their own needs, although they may require technical and material assistance. These mechanisms may be in the form of reconstruction committees at the village and town levels made up of representatives of the affected communities. Greater local participation could minimize social tensions and could lead to more sustained reconstruction efforts.
- **Equity.** In providing assistance to disaster victims, many differing approaches and programs may be used. Unfortunately, different approaches may result in the inequitable distribution of resources. One of the ways in which this problem can be avoided is by setting uniform policies or guidelines and minimum standards.

² For the purpose of this guide, “assisting groups” refers to all entities, including the government, NGOs, the private sector, the donor community, etc., which provide technical, financial, and any other types of assistance to the disaster-affected population

Financial assistance, for example, should be provided equitably among all affected individuals and families, regardless of their caste, social and economic status, gender, and religious affiliations. Any disparity in its distribution, where some individuals, families, or communities receive more assistance than others, can cause dissension and can hamper the reconstruction process.

- **Mitigation.** Reconstruction offers unique opportunities for introducing a range of measures to ensure that communities survive future disasters with minimum loss of life and property. Reconstruction efforts should therefore be aimed at attaining post-disaster conditions which will be superior, at least in terms of disaster resistance, to those which existed before. This can be achieved by introducing improved methods of construction, building regulations, and land use planning (see *Policy Tools* below). Their adoption should be made a prerequisite to planning and implementing reconstruction.
- **Minimum Relocation.** Relocation is frequently considered by governments in setting their reconstruction policy. Past experiences worldwide, however, have repeatedly shown that “wholesale” relocation very seldom works. At the local level, a disaster indicates where high-risk areas lie. For example, structures built on loose, unconsolidated soils are most vulnerable during earthquake. A more feasible alternative, therefore, is the selective relocation of parts of the community away from these sites, but remaining within the same general area. Where relocation is necessary, the affected population should be consulted and provided with technically and economically feasible resettlement options, as well as assistance in terms of temporary housing and transitional support (e.g., subsistence support, short-term employment, etc.).

Key Elements of a Reconstruction Policy

The above guiding principles lay the foundation for several key elements of a reconstruction policy that necessarily include:

- establishing an institutional framework for implementing reconstruction

The policy must identify the roles of all organizations (public or private, governmental or nongovernmental), at all levels (national, state, local³) and involving all sectors (shelter, livelihood, education, health, physical infrastructure, etc.) that will be responsible for reconstruction. The chain of command governing relationships between and among these organizations, the roles and responsibilities of each, and the mechanisms for coordination and cooperation among them should be clearly defined in both policy and legal frameworks for practical implementation (see Chapter 5 for more details).

- establishing a framework for public participation in reconstruction planning and implementation

Reconstruction is too important and too big a task for the government to undertake all by itself. The policy should therefore stipulate the need for the affected population to actively participate in reconstruction efforts and to clearly specify the mechanisms by which they can do so. One of the most effective means of involving the affected communities in reconstruction is to allow them to form their own reconstruction committees through which they can actively participate in the planning and management of their own reconstruction (see Chapters 4 and 5 for more details).

- establishing a framework for providing “entitlements” and financial assistance to the disaster-affected population.

The policy should stipulate that the disaster-affected population should be provided with reconstruction assistance to help mitigate the impact of a disaster. The assistance framework should define the types and level of entitlements and financial grants being provided to the disaster-affected population, the methodology used to establish entitlement rates, the eligibility for these entitlements, as well as the method, the timetable, and the agency responsible for delivering them.

It is important that the methods for damage assessment, valuation of lost assets, and criteria by which affected people are considered eligible for entitlements and other assistance should be disclosed. As much as possible, consultations with representatives of the affected

communities should be made to assess the adequacy and acceptability of the entitlement rates.

Likewise, the method for delivering compensation (either cash payments or in-kind allocations) should be clear. Those eligible should be given advance notice of the date, time, and place of payments via public announcement. Receipts should be signed by all those receiving compensation payments and retained for auditing purposes. The payment of compensation should be monitored and verified by representatives of the affected communities. It may also be appropriate for the government to engage the services of an independent registered auditing firm for this purpose.

- establishing mechanisms to resolve grievances of the affected population

Grievances invariably arise among the affected population over such issues as delays in releasing financial assistance to them, erroneous damage assessment of their property, forced relocation, etc. It is therefore necessary to create a formal mechanism to address complaints and grievances. This may take the form of *Lok Adalats* or people’s court, or an ombudsman office at the lowest governance level possible (at the village level in the worst affected areas). The existence of the grievance redress mechanism and how it functions should be widely publicized in all disaster-affected communities. All affected groups should have equal access to grievance redress procedures. The latter should be clear, transparent, and easy to understand, allowing the affected population to lodge a complaint or a claim without cost and with the assurance of a timely and satisfactory resolution. As much as possible, grievances should be resolved through facilitation, and recourse to the legal system should be avoided except as a last resort.

- establishing a regulatory framework for mitigation

There is a very real need to improve the quality of structural design and construction in earthquake-prone areas. The purpose of regulation is to implement patterns of land use and methods of building construction to minimize the dangers to life and property when disaster occurs. Relevant controls may take a number of different forms: prohibiting development in high-risk areas, mandating designs and construction techniques that make buildings and other structures disaster-resistant, altering land use patterns to direct settlements and economic activities to safer sites, etc.

³ Local level, as used in this guide, refers to all levels below the State level, i.e., the district, city or town, block, and village levels.

However, without support, such as financial assistance and training programs, it is unrealistic for the government to expect the affected population to make changes in the location and construction of their homes. Land use regulations may be appropriate in the higher income urban areas, but are ineffective in the villages where mitigation measures must be introduced through the local community structure, rather than simply by laws and regulations.

Policy Tools

Regulations. *Land-use controls*, including zoning ordinances, can be an effective tool for reducing the risk of future disasters. A zoning ordinance usually defines land uses and classifies them into such broad categories as agricultural, residential, industrial, commercial, and recreational uses. On high-risk sites, for example, the ordinance may stipulate outright prohibition of new construction or they can then be zoned permanently for recreational use, thus minimizing the concentration of people who might otherwise settle on them.

Building codes are used to set the minimum acceptable safety standards for houses and buildings. Using stricter building codes in disaster-prone areas and mandating the use of disaster-resistant design, material, and technology in new construction are essential additions that need to be incorporated in existing building by-laws. *Density controls* may also need to be revised to decongest and regulate lot sizes and floor areas, thus minimizing risks when a disaster occurs.

Program standards. These are often used by governments to establish minimum levels of assistance to be given to the disaster-affected population. Housing assistance, for example, is provided to those whose house is destroyed or severely damaged, as long as they meet certain basic, minimal standards of construction, i.e., using disaster-resistant building materials and designs. Rather than employing regulatory instruments or controls, the government provides technical assistance to enable disaster-affected families to reach a level of safety standard.

Whatever policy tools are used, the wide application of appropriate and affordable disaster-resistant construction technology, using local building materials, designs, and expertise, is crucial to sustainable reconstruction efforts. Furthermore, construction monitoring and code enforcement should be carried out throughout the construction process.

Who Sets the Policy

The responsibility for establishing and implementing reconstruction policies rests primarily with the government. However, in order to ensure responsiveness, suitability, and maximum compliance, as many interested parties and agencies as possible should be involved in policymaking and in setting standards. The representatives of the following key entities should be involved and should constitute a reconstruction advisory committee responsible for the task:

- the disaster management authority mandated by the government
- appropriate local governments
- appropriate line agencies
- appropriate financial institutions
- local CBOs, NGOs, voluntary organizations, citizens' groups, civic organizations
- private corporate sector (trade, commerce and industry groups)
- local academic, research and training institutes (architects, engineers, planners)
- local media

In developing policies, it is essential that mechanisms for policy dialogue at the local level, which will feed into higher-level decision-making, should be established. These may be in the form of a series of village-, city-, and / or district-level discussion forums organized to evaluate policy options before policies are finalized.

IV. Formulating Participatory Reconstruction Plans

The Planning Process

Getting started. A good starting point for any group who has decided to help villages or towns plan for their reconstruction is to collect background information on these areas from: (i) the results of damage and needs assessment; (ii) socio-economic studies conducted on the village/town, if any; (iii) land records from district-level agencies; and, (iv) other relevant data from NGOs who have done or are doing some work in the village or town. These information are important to make a preliminary assessment of the situation in the disaster-affected area. Another important set of information is the policies of the government with regard to reconstruction, including entitlements and financial assistance being provided to the disaster-affected population. Only by becoming familiar with all the relevant information can anyone confidently engage in informed and constructive interactions with the affected community.

Launching the planning process. There is no one “correct” way to initiate the participatory planning process. The local government, an NGO, or a group of committed private individuals can take the lead in mobilizing rural and urban communities towards reconstruction. In communities where the “initiators” are NGOs or private sector groups, it is essential that they encourage the local government to participate in or lend its support to the process. There are several reasons for this:

- local governments that understand, promote, and support the participation process provide a favorable political environment that is needed to drive and sustain the task of reconstruction.
- local governments often has direct responsibilities for implementing many of the actions that evolve from the planning process.
- they can facilitate the provision of assistance, technical and financial, to help sustain the communities’ efforts at reconstruction.

Forming a Reconstruction Committee. Having gained local government support, the initiators should next identify and bring together key community leaders to form the Village Reconstruction Committee or, in the case of cities, the Town Reconstruction Committee. Forming such a committee is the most effective means for the disaster-affected rural or urban communities themselves to develop

their own reconstruction plan. However, if there already is an existing community-based organization (CBO) that represents the interest of most, if not all affected groups in the community, this CBO should organize the Reconstruction Committee from within itself.

The Reconstruction Committee should include the recognized leaders of the community, elected local officials, and representatives of NGOs working in the community. In order for the Committee to have legitimacy and credibility, it is important that the various interest groups (stakeholders) in the community, including the vulnerable groups (women, the elderly, the physically disabled, etc.), be represented in them. The initiators’ task is to build consensus among these leaders on the need to develop a reconstruction plan for the community and seek their agreement to lead the process.

As the focal point for engaging the community in the planning process, the Committee is best placed to reach out to all interest groups in the community and solicit their active involvement in identifying priority needs and their proposed actions to address these needs. It is also through the Committee that information, resources, and services supporting the reconstruction efforts of the community can be coordinated.

The initial responsibilities related to the planning initiative include:

- Defining and agreeing on the objectives and scope of the plan;
- Mobilizing resources to start community mobilization;
- Identifying all interest groups (stakeholders) in the community; and,
- Initiating preliminary public awareness activities.

Identifying stakeholders. The Reconstruction Committee should be able to help identify all the interest groups (the “stakeholders”) in the community (see Box 3). Broadly speaking, these should include representatives of:

- **Community and citizens’ groups**, i.e., groups belonging to or affiliated with a certain caste, religion, occupation, or profession.

- **The government**, encompassing public and semi-public entities in a wide range of sectors (line agencies) and roles (i.e., elected and administrative officials), at the village, district, and state levels, with reconstruction-related responsibilities.
 - **Civil Society Organizations**, including NGOs, CBOs, civic groups, voluntary associations
 - **Private/corporate sector**, i.e., the business and industrial groups
 - **Professional groups**, including academic, research, and training organizations, consulting firms, etc.
 - **Media** from newspaper, radio, and television networks.
- get together and learn about the planning initiative, voice their concerns, and begin to identify problems and their proposed solutions. They also provide a mechanism to clarify issues and dispel rumors arising from the general confusion that often prevails following a disaster.
 - Prepare information/publicity materials focusing on the objectives of reconstruction planning, why it is important, and what the benefits of participating in its preparation will be to the community. These materials can be in the form of brochures, posters, leaflets, etc.
 - Work with the media. One of the most effective means of disseminating information related to the planned activity is through the local television, radio, and

Box 3: The Stakeholder Groups Involved in Plan Formulation

At the village level (in Bhadreswar)

- communities belonging to different castes and / or religion
- communities involved in various occupations, such as retail trade, farming, animal husbandry, fishing, vegetable selling, wage labor, etc.;
- the marginal and / or vulnerable groups, such as the women, youth, elderly, disabled, etc.; and
- CBOs and NGOs operating in the village

At the town level (in Bhuj)

- Citizens' groups
- Area Development Authority
- Municipality
- NGOs operating in the city
- Developers
- Business community
- District Collector
- Financial Institutions
- Cultural institutions

Source: EPC, Guide for Planned and Participatory Reconstruction, October 2001.

Organizing Preliminary Public Awareness and Outreach Activities. Raising public awareness is a good first step to get the planning process off the ground. With the Reconstruction Committee spearheading the activity, public awareness and outreach activities specifically targeted at all stakeholder groups in the community can now be organized. The purpose is to inform community members about the scope and objectives of reconstruction planning, to stimulate their interest to participate in its preparation, and to generate preliminary ideas and opinions on priority needs and proposed reconstruction actions.

The following public awareness and outreach activities can be considered:

- Organize community meetings. These public meetings provide opportunities for the affected community to

newspapers. Given their reach, it is important that all information relayed by the mass media are clear, accurate and up-to-date to avoid confusion and reduce the risk of creating false expectations.

- Hold other community activities, such as community plays, fairs, and other cultural events that can help attract people's attention to and generate interest in the planning activity being launched in the community.

Developing Strategies. The information collected from damage and needs assessment surveys and from the preliminary consultations conducted during community meetings provide a clearer picture of the most pressing issues and needs of the community. In developing reconstruction strategies, however, the community should

first determine if it has the capacity and resources needed to address these needs and issues. Often, local capacity and resources already exist, but are overlooked or discounted. Mobilizing them should enable the community to move beyond dependence on external resources, which are usually available only during the relief phase of a disaster.

One tool that is commonly used to assess a community's capability is called "SWOT" analysis or "Strengths, Weaknesses, Opportunities, and Threats" analysis. In rural villages, for example, families are often self-reliant in the basic skill of shelter construction and have, in any case, built their own houses (strength). However, they lack knowledge of earthquake-resistant construction techniques (weakness). Reconstruction provides them with *opportunities* to improve their own housing, but private building contractors pose a *threat* to their self-help efforts. As communities begin to better appreciate their strengths and weaknesses, they become better at developing strategies towards appropriate actions. SWOT analysis also helps them identify needs that they can not meet and which require assistance from outside, either from higher levels of government or from donor organizations.

Creating Community Vision. Communities that develop plans for post-disaster reconstruction can highlight what they regard as their most important objectives in what is sometimes called a vision statement. To provide direction to their reconstruction efforts, they need to build consensus around a vision for how they want to rebuild after a disaster, and what they want their future to look like.

Since it is important that the community vision represents the views of the entire community, the Reconstruction Committee should seek the community's input to its development. The vision can shape important decisions that the community will have to take. The Committee and the community may find it valuable to refer to its vision statement throughout the development of its reconstruction plan (see Box 4).

Developing the plan. With a clearer understanding of the community's needs, capacity, and resources, the Reconstruction Committee now has a good basis for identifying the range of reconstruction actions that they can take up. These actions often relate to housing and livelihood restoration at the initial stages of reconstruction, but may also include the restoration or improvement of

Box 4. Bhuj 2011 – Draft Vision Statement

- Bhuj is a vibrant centre for trade and commerce in Kutch, specializing in handicrafts, mining-based industries and building material manufacturing and trading.
- Bhuj is a major tourist destination and the main entry point for tourism in Kutch.
- All earthquake-affected citizens of Bhuj have been rehabilitated physically, economically, and socially.
- Bhuj is equipped to withstand and manage disasters with minimum loss of life and property.
- The urban form of Bhuj, particularly the Walled City, reflects its traditional cultural identity.
- Bhuj has an efficient water management system that conserves precious water resources, reuses water, and recharges the aquifers.
- Buildings, public spaces, and public services and amenities in Bhuj are designed to cater to the needs of vulnerable social groups.

Source: Environmental Planning Collaborative, October 2001.

infrastructure and services, all of which are essential to the community's long-term development.

Having identified such development opportunities, the Reconstruction Committee can now begin the process of determining specific actions that can move it toward fulfilling its vision. One practical approach to developing the plan is for the Reconstruction Committee to draft the plan based on a consensus view of its members regarding priority actions. Alternatively, the Reconstruction Committee might consider convening groups of stakeholders associated with each specific issue (for example, groups of farmers and fishermen who lost their livelihood) to brainstorm on possible actions addressing that issue. Tapping into the knowledge of several stakeholder groups involved with the sector being considered enables more community members to participate in plan formulation and ensures that the broadest possible set of actions are identified. The Committee can then use the results of the stakeholders' forums, draft the plan, and then seek further public comment during communitywide workshops.

Presenting the plan for comments. Comments and inputs to the plan can be sought in a variety of ways, including holding community forums and workshops, organizing separate focus group meetings, preparing a

short written summary of the plan for public distribution, etc. This phase provides an added opportunity for all interest groups in the community to articulate their views and preferences, and thus enhance their support for the plan. It is important for the Committee to allow sufficient time to receive comments on the draft plan, and then review these comments to determine the necessary changes to be made.

Adopting and implementing the plan. After all changes have been made, the Reconstruction Committee should present the revised plan to the community in an appropriate forum for adoption.

V. Establishing the Management Framework for Reconstruction

Post-disaster reconstruction requires an institutional framework that identifies the specific agency with overall responsibility for managing this task, and other supporting agencies responsible for the range of specific services to be provided. This framework also specifies mechanisms for multi-agency coordination, allowing for the management of reconstruction to be undertaken and resourced at the most appropriate level, and providing for support from the next higher level to be properly coordinated. Such institutional arrangements should be clearly understood and accepted by the disaster-affected population and all those providing them with assistance for reconstruction — government at all levels (state, district, city, village), NGOs, the private sector, professional groups, the donor community (local, national, international), etc.

Most countries have their own institutional arrangements for disaster management, including reconstruction. In some cases, a separate organization is created especially for disaster management operations; in others, a regular government department is given this additional responsibility. Likewise, in countries with a highly centralized government, the disaster management institutions are also typically highly centralized; in others with strong tradition of decentralized control, disaster management tends to be primarily a function at sub-national levels — either at the state/provincial or regional level.

While there is no single blueprint to best implement post-disaster reconstruction, this function should be devolved to the lowest level possible, *where capacity exists*. In countries with administrative capacity at the sub-national level, local governments can perform the key task of allocating roles for all assisting groups. In spite of the obvious risk of delegation of authority, local management of the reconstruction process has advantages. It is at the local level where the scope for interaction and collaboration between the disaster-affected population and the government is greatest. Local management speeds up the decision-making process for managing reconstruction operations (see Fig. 1).

Managing the Implementation of Reconstruction Plans

While it is important to remember that post-disaster reconstruction is primarily a government function, it is most effective when the affected individuals and communities actively participate in managing their own reconstruction activities in accordance with their own reconstruction plan. However, recognizing that the local capacity to sustain an effective reconstruction process will vary, the government and all concerned assisting groups should provide the required level of assistance (technical and financial) to local reconstruction initiatives. They (the assisting groups) should complement and supplement these local initiatives and not supplant them.

Managing Implementation at the Village Level

At the village level, the implementation of the village plan can be more effective if carried out through existing community-based organizations (CBO) with already established, collaborative experience in the village. The Village Reconstruction Committee members who lead the process of preparing the village reconstruction plan are usually drawn from the leadership of these local institutions.

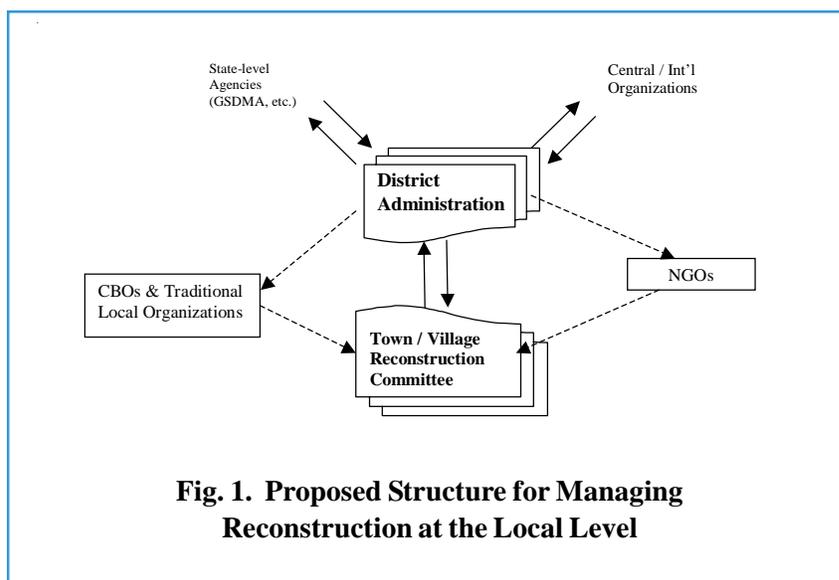


Fig. 1. Proposed Structure for Managing Reconstruction at the Local Level

As the Reconstruction Committee starts to take on new responsibilities related to implementation, it may consider forming several self-help groups who can implement and supervise specific actions as identified in its reconstruction plan. The Committee may mobilize motivated and responsible men, women, and youth volunteers from the community to form themselves into self-help groups of 5 to 10 members each, depending on the convenience of community members. Each group will have specific management responsibilities associated with each component (e.g., housing, livelihood, health, etc.) of the community's plan.

Where no CBO exists, and where the village reconstruction committee lacks organizational, administrative, and technical skills to manage reconstruction activities, the Reconstruction Committee may consider partnering with a local NGO. It should be able to select the NGO with whom it wants to collaborate. Ideally, this NGO should already have an established, good working relationship with the community, and has the competence to provide assistance to the community in its reconstruction efforts. As its implementing partner, the NGO's role is to help the Reconstruction Committee and the village residents to:

- organize themselves into self-help groups or sub-committees – for example, for construction, livelihood/income generation, monitoring, information; dissemination, savings and credit, groups to run community centers for women and children, and other groups, as needed (see Fig. 2);
- design/formulate project proposals, and seek funding from and follow up with the government and other donors, local and international, to complement local resources;
- identify reconstruction options (involving housing construction, livelihood, etc.) to assist the community in making informed decisions;
- execute, coordinate, and monitor village reconstruction projects.

On their part, the Reconstruction Committee and village residents must:

- constitute a formal village reconstruction committee that contracts agreements with its partner NGO and the government;
- form self-help groups to plan and implement village reconstruction activities;
- contribute skills (in construction, for example) and resources (cash, material, labor, and other services);

- establish implementation and monitoring schedules, and monitor progress and performance of reconstruction activities;
- participate in all other support services, such as stocking construction materials, damage assessment, etc.

The State- or district level government authorities must:

- make financial assistance (i.e., entitlements, loans) within easy reach of affected communities
- facilitate provision/restoration of required physical infrastructure and social services
- provide clear, easily available information on government policies, programs, and financial assistance available to the community.
- set up systems for redress of grievances and conflict resolution
- develop and adopt flexible administrative and legal procedures to facilitate NGOs, CBOs, and/or groups of homeowners to rebuild, repair or retrofit houses.
- conduct geological and seismological study of the affected areas and make sure that no construction is permitted on high-risk sites.

To put the above tripartite arrangements into effect, a memorandum of agreement defining each partner's role in relation to one another and setting out areas of joint activity as well as areas of sole responsibility is necessary. This is to guide the reconstruction process and the payment mechanisms that are involved as reconstruction work progresses.

Managing Implementation at the City Level

At the city/town level, the implementation phase of reconstruction is very distinct from the planning phase. This is so because for many types of infrastructure and services needed to redevelop disaster-affected towns, there is no realistic alternative to government at the district or state levels taking the lead role in implementation. Reconstruction efforts in cities/towns often involve a mixture of government from different levels (State, district, municipal) and nongovernment institutions contracted by the government to undertake specific tasks. While the planning phase involves the Town Reconstruction Committee leading the process of *jointly* preparing a plan with various stakeholder groups, implementation requires that various government or government-contracted institutions take *individual* responsibility to implement reconstruction actions. Ideally, the Town Reconstruction Committee will have involved these institutions early in

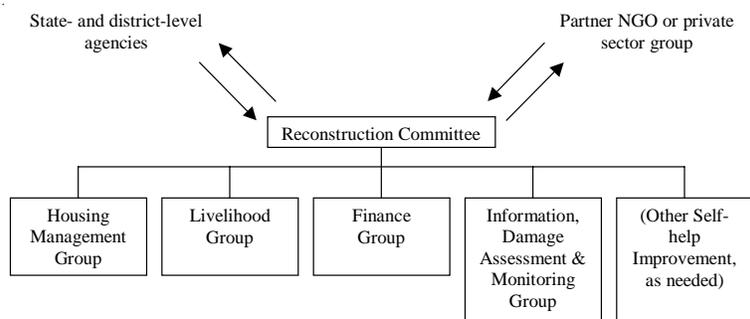


Fig. 2. The Village Reconstruction Committee

One approach to executing the above responsibilities is for the Reconstruction Committee to form sub-committees for each sectoral element of the plan, along the lines proposed for village self-help groups as discussed above. Each sectoral group will be responsible for following up on the implementation status of each sector with the responsible line agency, and for providing regular progress reports to the Reconstruction Committee. This will form the basis for the subsequent actions that the

the preparation of the town plan to build support for active implementation.

The Reconstruction Committee can continue to play an important role to help ensure that recommendations in its plan are fully implemented. Ideally, the municipality will give the Reconstruction Committee a new mandate or “official directive” to facilitate, oversee, and monitor implementation efforts.

While originally constituted to take the lead in the planning process, the Reconstruction Committee now starts to take on new responsibilities related to plan implementation. At this stage, it might be appropriate to consider redefining its role from serving as a *planning* committee to becoming a *management* committee. As such, the Reconstruction Committee should strategize about what needs to be done to ensure that the plan is actually carried out by officially mandated implementing agencies, and not shelved or forgotten.

The Reconstruction Committee can be responsible for the following tasks:

- Advocating, on behalf of the town/city, with government agencies responsible for implementation;
- Facilitating citizen cooperation with these responsible implementing institutions;
- Collecting data on appropriate performance indicators;
- Monitoring, reviewing progress, and evaluating implementation efforts;
- Advising the municipality on reconstruction-related issues; and,
- Conducting educational activities to sustain interest in the continuing tasks at hand.

Committee will take to facilitate the implementation of the town reconstruction plan.

Capacity Building

The implementation arrangements, as discussed above, presuppose more capacity than may actually be available on the part of the communities and their Reconstruction Committees, as well as on the part of assisting partners. With limited capacity to deal with post-disaster situation, the management structures put in place should be supported by training programs to adequately prepare them for their roles.

Some of the immediate capacity building needs at the village level include, among others:

- training of community leaders in organizational and social skills, e.g., in conflict resolution, communication, and management;
- training of local masons, artisans, skilled laborers, and youth in earthquake-resistant construction;
- training of community volunteers to supervise and monitor construction, livelihood programs, etc.; and,
- developing the community’s capacity to plan collectively; prepare project proposals; implement and monitor progress of community projects; manage village funds; and other organizational and administrative, as required.

Each village and town, through its Reconstruction Committee, should draw up specific capacity building plans based on its capacity building needs assessments at different stages in implementation, to which support from their assisting partners should be provided. The trainers

should be drawn from locally available expertise, whenever available, including government institutions, NGOs, private academic/training/research institutions, consulting groups, etc., to provide the range of capacity building inputs as enumerated above.

With varying degrees of technical competence, the capacity of NGOs, private sector groups, and other potential partners also needs to be strengthened. Their field

staff require training in the planning and management of post-disaster reconstruction operations to enable them to facilitate the process. Government personnel, on the other hand, may require “sensitivity” training to enhance their understanding of the needs and perspectives of nongovernmental groups and organizations. Government engineers and assessors involved in reconstruction activities require specific training in earthquake-resistant construction and damage assessment.

VI. Managing Information

Much of the success of reconstruction depends on how well information is managed. The massive reconstruction effort requires an information management system to systematically gather, process, analyze, and disseminate accurate and timely information relevant to the task. The overriding purpose is to improve the capacity of the intended users of information (notably the decision-makers and the affected population) to make informed choices, plan their activities, and take decisive reconstruction actions.

Establishing an information management system for reconstruction involves three major tasks, i.e., collecting information, disseminating information, and getting feedback.

Collecting information

The first step in designing an information system is to determine what type of information is needed and by whom. Collecting information should always have a clear purpose and a specific target user in mind. In the context of reconstruction, some of the major information needs include:

- Information on the nature and degree of damage caused by the disaster and the resulting needs of the affected community (as discussed in Chapter 2).
- Profile of the disaster-affected areas (village, towns and cities) and the socio-economic profile of the affected individuals, families, and communities
- Information needed to monitor and evaluate progress and performance of reconstruction operations being implemented in the affected areas.

Once information needs are identified, the next step is to determine what and how data will be gathered. This step entails selecting the best method(s), designing standardized formats, and mobilizing trained teams for data collection. The collected data are then processed (grouped, classified, and stored), using standardized formats and data bases. This is important so that the data can be easily referred to, as needed. The last steps are to analyze and interpret the data, and convert them into useful information. The latter can be presented and packaged in

the form of reports, maps, and/or charts, depending on the needs of the intended users. What is important is to select and provide users only those information relevant to their task, formatting and presenting these information in such a way as to draw attention to the major findings.

Disseminating information

One of the most important information management tasks is to identify what needs to be communicated, to whom, and when. During the reconstruction process, there are several important information that need to be clearly and quickly communicated to the affected communities.

These can be broadly grouped as follows:

- A clear, accurate picture of the situation on the ground—the exact location of the disaster, the number of people affected, and the extent of damage, including causes.
- Government policies regarding reconstruction, including: (i) entitlements and financial assistance available to the affected individuals, families, and communities, and the basis on which these are set; (ii) the criteria and procedures for assisting organizations to partner with the affected communities; (iii) housing reconstruction options (i.e., *in situ* construction, relocation) and the requirements and procedures for each; and (iv) procedures to follow for those with complaints or grievances. It needs to be stressed that every single disaster-affected family should be made aware of all these critical information.
- Reconstruction plans to be prepared or being prepared in the affected communities. The objective in this regard is for the latter to be made fully aware of these initiatives and be encouraged to participate in the process.
- Information on disaster-resistant construction as well as retrofitting techniques. Perhaps the biggest challenge of reconstruction is how to rebuild or retrofit thousands of houses. This entails providing detailed information on techniques and technical standards to a very large number of homeowners, laborers, builders, architects, and surveyors. It may also require demonstrating and teaching alternative designs and methods to encourage their adoption.

The above are the most basic and essential information that need to be publicized in order to promote awareness and informed participation of individuals and communities in the reconstruction process. It is critical not only for this information to be widely disseminated (especially in the worst affected areas), but that they be conveyed in the local language, using simple, nontechnical jargon.

To disseminate information, a variety of media and methods can be employed. These include the use of local newspapers/newsletters/periodicals; radio, television and various electronic media, including the Internet; brochures and handouts; posters on public display; public meetings and forums; etc.

The reconstruction period is often a long one and may last several years for severe disasters such as an earthquake. Information dissemination activities should have a similarly long perspective, and reconstruction information needs to be kept in the forefront of the public's attention.

Generating feedback

Information can facilitate consultation and participation when used as part of a two-way communication process. Given the massive reconstruction task at hand and the multiplicity of stakeholders involved, putting in place an effective feedback mechanism is essential for the government and other partners to convey critical information to the affected communities, and for these communities to channel their views back to them. This two-way communication mechanism is necessary for several reasons:

- It gives voice to the disaster-affected population, including the poor and vulnerable groups.
- It helps in assessing the suitability and effectiveness of interventions within communities, and in making the necessary adjustments based on the latter's feedback.
- It assists in resolving grievances (hence, the need for a grievance redress system as part of the feedback mechanism).
- It promotes accountability. Ideally, feedback is solicited so that actions are taken in response to what is being conveyed, and proposed changes are made when deemed necessary.

To be effective, the feedback mechanism requires a network of community-level workers who not only dispense information, but also solicit views to be fed back into policy and operations. It should ensure that a meaningful dialogue be maintained with the affected people for whose intended benefit reconstruction activities are undertaken. Ultimately, however, its success depends on the responsiveness of all those responsible for managing reconstruction actions.

Establishing a Focal Point for Information Management and a Network of Community-based Information Centers

To reduce the likelihood of confusion that often characterizes the post-disaster period, it is important that a focal point for information management be established. The objective is to coordinate and speed up the process of information collection, processing, analysis, and dissemination conducted by a whole range of groups and organizations involved in reconstruction. This focal point may be an autonomous field-based information management center that is best located near where the bulk of reconstruction operations are being undertaken.

The main responsibility of this focal information centre is to develop and operationalize a management information system (MIS) that ensures a two-way flow of accurate, complete, and timely information to and from the responsible authorities and decision-makers at all levels, the affected population, and all other organizations that need them. To be able to do this, the focal point should:

- Design standardized formats and organize teams for collecting, processing, evaluating, and packaging information for distribution
- Generate thematic maps, using GIS software and technology, to aid decision-making, and provide GIS support to interested organizations involved in reconstruction
- Establish a system of online information transfer to and from itself and a network of local information centers, as will be discussed next.

Along with a focal information management centre, it is advisable that a network of community-based information centers be set up. These centers will serve as readily accessible "one-stop shops" for the affected

population seeking information on the range of assistance, resources, and services available to them. At these centers, simple, easy-to-understand, updated facts and information-at-a-glance can be prominently displayed. To be effective, it is important for these centers to have the capacity to:

- provide relevant, complete, accurate, timely, and up-to-date information to the affected population, particularly on government policies, their rights and entitlements, available financial assistance, procedures and criteria for eligibility.
- develop a strategy to disseminate these information in a format that is easily understandable to the affected population
- serve as a “help-desk” where the affected population, collectively or individually, can seek advice or bring grievances, and where the response to these grievances by the responsible party can be facilitated.

Using Mapping Technology

The use of maps and mapping techniques is valuable for managing response during all phases of a disaster, including reconstruction. With microcomputers and the availability of GIS software technology, different types of

maps including topographic maps, land-use maps, geologic/seismic maps, maps locating the distribution of disaster-affected communities, infrastructure, etc., can be computer-generated.

In the context of reconstruction, maps are valuable for damage assessment, risk analysis, and reconstruction planning and management. For example, they can be used to guide decision makers who must determine whether or not to relocate segments of the population in high-risk areas, and where to relocate when necessary. Information collected from damage and needs assessments can be plotted accurately on maps and can be updated as situations improve over time. They can be provided to decision makers and aid providers for easy reading and prompt action.

VII. Case Study: Bhadreshwar Village

The process of participatory planning for the reconstruction of Bhadreshwar was initiated by EPC. As a first step, the EPC team identified the recognized leaders in the village with the help of Abhiyan, which had earlier worked in the village. These key role players included the sarpanch, the deputy sarpanch, a shopkeeper, and a primary school principal. EPC's initial task was to convince them of the need to plan for the reconstruction of Bhadreshwar with the active participation of the villagers.

Consultative Meetings

Having given their support, the village leaders, in turn, assisted EPC in making a preliminary identification of the various interest groups (stakeholders) in the village (Box 3). They prepared a list of people who could best represent each of these stakeholder groups to a consultative meeting being organized in the village. The purpose was to raise awareness about the importance of developing a reconstruction plan for the village and to stimulate the interest of various stakeholder groups to participate in this process.

To ensure that the consultative meeting would be widely attended, the village leaders met with each representative a few days earlier to explain EPC's proposed planning initiative and the purpose of the consultative meeting. On June 13, 2001, the consultative meeting was held and attendance was more than what was expected. The EPC team introduced its participatory planning proposal and, with the aid of charts and handouts written in Gujarati, explained its objectives. The team also facilitated a brainstorming session to engage the participants in analyzing the existing situation in the village and in identifying issues, needs, and priorities that would be fed into the village reconstruction plan. Some of the main issues raised were the lack of the villagers' involvement in damage assessment surveys, and the lack of clear, easily available information on entitlements, compensation, and government programs. By the end of the meeting, the participants conveyed their full cooperation and support to the planning initiative.

Stakeholder Analysis

Ideally, all village residents should have been invited to the consultative meeting. Since this was not possible, the EPC team conducted a stakeholder analysis to identify

the full range of stakeholder groups in the village whose active involvement in village reconstruction was then actively sought. The analysis aimed to ensure the inclusion of as many segments of the village population as possible and to maximize their role in developing reconstruction strategies and projects.

The stakeholder analysis involved two types of study: the community study and the livelihood study.

Community Study. This study was conducted to gain a deeper understanding of the social structure of the village. Visits and informal discussions with individual communities grouped on the basis of caste, religion, and/or occupation were conducted. The informal 'focus group' meetings with such communities as the Jadejas/ Darbars, Rajputs, Harijans, Datanyas, Khojas, Muslims, and Lohanas, among others, ensured that the interests of each were considered in the identification of needs, priorities, and the vision for the village.

Livelihood Study. The livelihood study, conducted at the same time as the community study, sought to identify various groups within the village who were engaged in the same occupation and who shared similar economic interests. The study determined farming, animal husbandry, small trade, fishing, and wage labor as the predominant livelihood sources in the village:

For the purpose of the study, village residents belonging to the same livelihood group were identified. From among members of each group, three to four individuals were randomly chosen for a semi-structured interview using a predetermined set of questions. The result was a preliminary identification of the needs and priorities of each livelihood group.

Socio-economic Survey

To complement the above studies which mainly relied on less formal, semi-structured discussions, a more in-depth survey was conducted to assess the post-earthquake socio-economic conditions at the household level. The comprehensive baseline data collected from the survey provided a broader understanding of the problems village households faced and the type of projects or interventions they needed to mitigate the earthquake's adverse effects on them.

The survey relied on primary data collection employing more structured interviews that made use of a questionnaire. To avoid vague or problematic questions, the questionnaire was pre-tested in a pilot survey. Based on the result of pre-testing, the questionnaire was redesigned to make sure the finalized questions were made more clear and concise. The survey was conducted between August 20 and 25, 2001, and was administered by professional research investigators who were given orientation on the objectives of the survey, as well as the values, caste and class structure of the village.

Since it was not possible to survey the entire village population on a household-by-household basis, a random sample of village households was drawn from predetermined representative areas of the village. Appropriate survey methodologies were followed to ensure that a statistically valid representative sample of all sections of the village household population – including women and other vulnerable groups – was included in the survey. The household level information collected from the survey was fed into a database.

Priority Issues and Needs

Among the main issues identified by the livelihood study are:

- Agriculture: The labor shortage in farms, resulting in high labor cost; the absence of crop insurance and the fluctuating prices of crops; and the need for canal irrigation.
- Fishing: Decline in fish catch due to pollution; exploitation of the fishing community by middlemen; lack of support facilities near the coast; general poverty among the fishing community.
- Animal husbandry: Lack of fodder; high incidence of illness among buffaloes; low price of milk.
- Vegetable selling: Lack of access to market; lack of storage facilities; fluctuating process of vegetables

Proposed Actions

To address its most pressing needs, the community prepared several project proposals that were submitted to potential funding organizations for assistance. These include, among others, proposals to:

- Retrofit partially damaged houses
- Develop alternative sources of water supply through water-harvesting schemes
- Develop alternative source of irrigation
- Promote dairying as an alternative livelihood source
- Implement micro-credit schemes for the fishing and vegetable selling communities
- Build support facilities near the coast for the fishing community
- Set up an information center for village reconstruction
- Develop the Basai temple infrastructure to attract tourism
- Upgrade skills of wage laborers, women, youth
- Develop a marketplace and storage facilities for vegetable sellers.

VIII. Case Study: Bhuj

Bhuj Municipality was one of the hardest hit towns in Kutch. Almost half of its old walled city alone saw considerable damage to buildings and infrastructure. The death toll in Bhuj was over 7,000. Most of the casualties were from the walled city area, where buildings made of stone and mud mortar came crashing down on very narrow streets. Along with the badly designed street pattern, the poorly framed regulations which had been loosely adhered to over the years accounted for the vast extent of destruction in Bhuj. The earthquake badly damaged social infrastructure (schools, hospitals, town halls, markets, libraries, colleges, a local *gymkhana*, an open-air theatre, and religious buildings) and utilities (reservoirs, pipelines, telephone exchanges, and power infrastructure, etc). In the walled city, the serious damage to water supply and sewer networks was made worse by the movement of heavy machinery to demolish severely damaged buildings and remove debris. Many historic buildings were also destroyed. With the demolition and clearing of rubble, retracing the town's street form and architectural character proved very difficult.

The Planning Context

With the unprecedented devastation of towns witnessed in Kutch and with no past experiences with post-disaster urban reconstruction in India, putting in place a reconstruction strategy required careful thought. In the immediate aftermath of the earthquake, the discussion both on the ground and in government revolved around two alternatives – total relocation of the city (“New Bhuj”) and *in situ* reconstruction. There were vocal proponents of both approaches among the public and among government officials. Having carefully considered all options, the government in April 2001 formulated a reconstruction package for the affected urban areas of Gujarat, which favored partial reconstruction and partial relocation. To guide and regulate their reconstruction and future growth, the government package stipulated that town planning would be carried out and that the development control regulations in these towns would be revised.

The Government of Gujarat decided to utilize existing provisions in the Gujarat Town Planning and Urban Development Act, 1976, to undertake the preparation of the Development Plan for the towns of Bhuj, Bhachau, Anjar and Rapar. It decided to use two statutory planning

instruments – the Development Plan and the Town Planning Scheme – to guide the planning and reconstruction of the four towns. It appointed the Gujarat Urban Development Company Limited as the Special Purpose Vehicle for the implementation of the urban reconstruction program. For both town planning and infrastructure design and reconstruction, consultants were appointed. Through competitive bidding, EPC was selected as the Town Planning Consultants for Bhuj, considering its core competence in urban, regional and environmental policy and planning, as well as development research and management.

Facilitating the Formulation of the Development Plan of Bhuj

The planning process at the city level presented peculiar difficulties for participation. For Bhuj municipality, it required relating to a population of over 100,000 within a limited timeframe. It also required the creation of representative structures and arrangements that could facilitate communication between and among a wide range of stakeholders.

For these reasons, two major exercises were undertaken at the outset — stakeholder analysis and a series of public consultation exercises carried out in two rounds.

The first round of consultations were held with government officials, community representatives, and other resource persons in the city to develop agreements over the approach to plan formulation, the method of participation to be used, and the list of stakeholder groups to be included in the process. After deciding on the full range of stakeholder groups, a series of meetings were subsequently organized to provide forums for engagement with these groups for the city planning process, leading up to the preparation of a Conceptual Development Plan. Discussions in these meetings revolved around the following:

- Situational analysis based on data collected from different urban sectors
- SWOT analyses of the proposed components of the plan
- Vision statement for Bhuj (see Box 4)

- Objectives, strategies and proposals for each plan component
- Conceptual Development Plan

In this way, needs and priorities were fed into the conceptual development plan, and a preliminary agreement reached over the direction of development in the city.

In the second round of consultations the Conceptual Development Plan was presented for debate at a series of focus group meetings and ward meetings, culminating in a city-level workshop with invitees from a broad cross-section of Bhuj society. Ward meetings were organized, in which citizens' reaction and comments to the Conceptual Plan were solicited through open-mike question-and-answer sessions. Maps indicating the overall direction of the proposed development and locations of infrastructure investments were put on display for review. The meetings were advertised by radio, through fliers, and via ward councilors. About 350 citizens attended the ward meetings. In addition a city-level workshop with select stakeholders was held. These forums were seen as a key vehicle for participation in the city-wide planning process.

Based on responses received during the presentation of the Conceptual Development Plan in July-August 2001, modifications were made and detailed proposals included. The Draft Development Plan was published in September 2001 and was advertised for public comment for two months. This provided the city residents with an additional opportunity to contribute to the planning process. Incorporating changes based on public responses and corrections in the base map, the plan was finalized in December 2001 and sanctioned immediately by the Government (under Section 16 of the GTPUD Act).

Facilitating the Preparation of the Bhuj Town Planning Schemes

In preparing Bhuj Municipality's Development Plan, EPC had stressed the need to develop a separate plan for the old walled city, Bhuj's center of commerce, which was the worst affected area in the municipality. The officially mandated Town Planning Scheme approach served as the principal instrument that guided the planning of the walled city. To launch the participatory planning process, EPC took several key steps:

Forming a Viable Community Institution

The EPC team sought the involvement of a local citizens' group to facilitate the planning process in the

walled city. Bhuj Development Council (BDC) was identified and persuaded to take the lead in the preparation of the town planning scheme, in collaboration with other NGO partners such as Kutch Nav Nirman Abhiyan (KNNA, otherwise known as Abhiyan), Bocheswar Akshar Purosattam Swami (BAPS), and the local newspaper, *Kutch Mitra*.

Community Mobilization and Organization to Facilitate the Planning Process

- Formation and orientation of the Study and Action Group. This group of about 60 Bhuj residents was formed by EPC and BDC to serve as a think tank to brainstorm on the problems and issues facing the city and develop solutions. It is a select group of enlightened citizens, opinion leaders and NGOs of Bhuj who understands the process and guide the planners based on their understanding of the city. They assisted BHADA and EPC in advocating policies, resolving conflicts, and developing proposals for the city's development.
- Formation of the Core Committee and the *falia*-level Committee. The Core Committee is a representative group of residents/property owners from the Walled City area. This committee planned and coordinated meetings between the planners and residents/property owners. The Core Committee took the help of smaller rehabilitation committees from various *falias* or neighborhoods in the Walled City. The members of the Core Committee were selected from the local rehabilitation committees and represent the entire Walled City area. The Rehabilitation Committees consist of representatives from the *falias* or neighborhoods in the Walled City. These committees were established to gauge local community issues and needs, and encourage community discussion and feedback on a regular basis. Their creation highlighted the efforts of EPC and BDC to establish representative structures that provided a space for more meaningful interactions and for the communities' voice to be heard. Along with the Study and Action Committee, the Core Committee, and the Rehabilitation Committees served as focal points through which priorities were articulated and decisions subsequently made to address them.
- The four-day workshop on the draft town planning schemes. A four-day workshop was organized by BDC to provide opportunity to the different stakeholders to

understand the town planning scheme and develop consensus on the draft plan. The workshop was held in the hall of Jain Wanda from May 2 to 5. Comments and inputs to the draft plan were solicited during the workshop.

- Consultation Meetings. Deliberations on the conceptual and draft town planning scheme were held at the talia and ward levels to raise awareness and educate the citizens on the principle and design of the proposed town planning schemes for the walled city.

- Establishment of the ward-level offices of BDC which also served as information center. BDC established eight ward-level information centers to disseminate information on the town planning schemes. The plans were displayed in the ward offices and people were assisted in filing objections or in making suggestions to the plan. This helped improve the latter.

- Rapport Building with Government Functionary. Recognizing that government support to the participatory process is crucial to its success, several meetings with BHADA were held to reach consensus on the strategic action plan. Consultation meetings with ward councilors were also organized to inform them of the ongoing planning activities and solicit their maximum participation and support to the process. Periodic focused meeting with these councilors were also held to resolve problems encountered. A half-day multi-stakeholder workshop was organized with officials from BHADA, the District Collectorate, and GSDMA, as well as the elected officials from the

Municipality and the wards along with the Study and Action Group. The purpose was to explain the steps being taken to prepare the draft town planning schemes. Later, a meeting between the Chief Executive Officer of GSDMA and BDC with EPC was held to discuss how support from the line agencies could be facilitated. Visits to the relocation sites with the officials from the responsible government authorities were held to determine progress on site. The interactions between the officials and different community groups at the site helped in identifying measures to resolve prevailing issues.

Conclusion

The planning process carried out for the redevelopment of the walled city of Bhuj is perhaps one of the most complex, but very rewarding planning exercises attempted in India. What has been achieved is almost unbelievable given the conditions in which the work was carried out. The process resulted in improved communication and cooperation among different spheres of government and the civil society. Through structures such as the various ward and neighborhood committees, and the series of public forums held, ample opportunities were given to the citizens to participate throughout the planning process. The resulting plan is a huge step forward in terms of what was standard top-down practice in the past, and provides an example of a plan that meets the objectives of participatory planning. There is commitment to the plan from senior officials at the State, district, town, and ward levels, and a strong leadership on the part of the BDC.