

## CHAPTER 3: BUILDING TOGETHER

### Introduction

#### Community participation

Vulnerability reduction at the settlement level is the ultimate aim of structural upgrading for earthquake protection. It is here that disasters take place when planning and developments fail.

The recent San Francisco earthquake would have caused far greater harm had not the city advanced so impressively with its structural upgrading program. Most victims fell due to the collapse of infra-structure facilities, rather than to the failure of residential buildings. The structural upgrading program (or retrofitting program as it is called in the US) had not only identified and disseminated suitable repair and strengthening solutions, but also proved very adept at developing linkages with residents and community organizations.

One particular area, where significant failures occurred, had already been identified as a problem area before the earthquake, not because of the difficulty in implementing appropriate technical solutions, but because of sociological factors. The area was a fairly closed community of elderly immigrants from the same origin. Difficulties in mobilization and communications rather than other aspects of the upgrading process were at the root of the problem.

Community participation has now been widely documented and its strengths and limitations are well profiled. It is a development approach with its own methodology and its own development principles. In structural upgrading programs for low income settlements it offers the conceptual and practical framework for the collaboration of the community with professionals, authorities and support groups.

Communities are not just localities and a group of houses do not necessarily form a community. Communities on the other hand can be corporate i.e. strongly interdependent or loosely knit. Rural social organizations are sometimes the result of external forces, lacking internal cohesion. Sometimes communities do not exist (e.g. in many urban environments) or do not function (e.g. during population displacements, wars, government persecution). In those situations, kin or primordial

groups still exist, but they do not form communities sui generis.'

#### Non-Governmental Organizations

Non-Governmental Organizations, NGOs, are indispensable in the promotion of upgrading programs. They form the two-way information channel between community and other actors. This chapter summarizes some of the essential steps in participation. Based on experiences from many different countries, it aims at assisting the different actors how to relate their efforts to the actions of others. In the end Community Participation represents a management model, which mobilizes local development resources that are not utilized in conventional projects.

Some NGOs are well aware of developments and innovations from elsewhere, and those may recognize much of the material here without difficulty or may even find it elementary. Other NGOs may have grown in relative isolation and might find this chapter helpful in devising their development strategy.

#### Project Support Communications

The development obstacles related to miscommunications are many. Projects and project strategies often tend to focus more on technical issues than on communication. As a result communications have emerged as one of the major problem areas in development planning.

Disaster reduction has only recently been placed on the development agenda and its purpose and potential will for some time to come have great difficulties to gain acceptance. It requires the integration of very diverse factors and to project these against often remote risks. Communications can therefore easily fail in disaster reduction.

The important role of NGOs in bringing together essential development inputs from many actors into a cohesive development plan for vulnerability reduction is very challenging. The section on Project Support Communications aims at facilitating their complex tasks



NGOs; Community participation; Project support communications;

## SESSION 1: BUILDING AND QUALITY

### Topic 1.1 : Structural strength and safety

In areas subject to earthquakes uncontrolled structures which do not conform to safety standards have shown to be potentially life-threatening.

Where construction activity takes place outside the control of a building inspectorate, there is reason for concern over the strength and safety of such buildings. In Egypt there are many clear examples of poorly built self-help, unregulated structures and thus unsafe buildings, which during the 1992 earthquake demonstrated their life threatening character.

Cursory examination of the structures in Helwan and Imbaba showed that there are many cases of thin slabs, exposed reinforcement bars in supporting columns, crooked building lines both vertically and horizontally, and other defects which would normally be rejected in a formal housing project. These deviations from normal structural praxis may not in themselves and under normal conditions lead to unsafe structures, but they do represent an area in which intervention by professionals concerned with safety is called for. This is especially important with respect to the long-term stability of the structures. No cases of spontaneous collapse or any kind of structural failure were found in Helwan, although these are not uncommon elsewhere in urban Egypt.

*The problems mentioned above are mainly due to a lack of co-ordination and inspection. These could be overcome through upgrading under good construction management.*

- ?
- Which main constraints do you expect initiating a upgrading program in Low Income areas?
  - Who could take initiative?
  - Does upgrading make sense in areas such as Imbaba?

🔑 safety standards; uncontrolled building.  
Egypt.

### Topic 1.2 : Builders in Developing Countries

When planning upgrading programs implementation channels should be chosen. The main actors are here: the large contractor, the medium-size contractor, the small contractor, the artisan, the unskilled laborer and the self-help builder

#### *Large contractors*

The big construction companies are financially and technically well equipped. Some of them are subsidiaries of foreign firms.

#### *Medium-size contractors*

These contractors are organized to the extent that they have a workshop, some staff and equipment and are able to put up one or more houses, schools, etc.

#### *Small contractors*

The small contractor is registered as a contractor, usually in the lowest categories and is basically an individual who may organize their own teams. In many cases they are retired artisans such as masons or carpenters. They often have a core unit of workers but no permanent staff.

#### *Artisans*

The artisan works either as a mason or carpenter in the self-help sector or he may even build an entire house. He can be employed by the day or on building contract and is not necessarily registered. His skills are often acquired 'on the job' but may have benefited from limited local schooling facilities.

#### *Unskilled laborers*

Unskilled workers constitute the majority of the labor force in the construction industry. Usually they assist craftsmen on any job. They are employed and paid per day as casual laborers. They line up every day to be selected by the foreman. As there is no continuous attendance, transfer of knowledge and some form of regular training are difficult to acquire

#### *Self-Help builders*

Self-help building is in general the cheapest method for the owner, using his own labor force and his own time. He needs some knowledge of organizing the construction process. He is likely to call in a craftsman for certain jobs, for example a carpenter for the roofing work. Self-help builders sometimes form building groups to assist each other during the process of organization and construction.

- ? a. Which groups of builders can be engaged in upgrading?  
 b. Which quality control measures do you propose when using these groups?  
 c. Who should set inspection standards?

key upgrading-builders; contractors; artisans; unskilled labor; self-help.

### Topic 1.3 : Approaches to project implementation

When planners are engaged in settlements projects they have a choice between two ways of approaching communities. They can adopt either a "top-down" transmittal strategy or a "bottom-up" participatory strategy.

In the Transmittal or Top Down Model planners make their plans, local authorities approve them, and community workers inform the residents what is going to happen. No options are offered, and little or no scope is given for the modification of the plan. There is no line drawn between Residents and Project implying that members of the affected community are not involved at all in decisions at any stage of the process

In the Participatory or Bottom Up Model residents are involved, jointly with the professionals, in planning and implementation. They are engaged in decisions about the project through discussions among themselves and with the professionals.

Planning authorities sometimes prepare plans in consultation with the beneficiaries, and decisions are made when there is consensus. Usually, options are presented, and there is scope for modifications.

Occasionally, planning authorities experience pressure from residents. By taking the initiative the community may demonstrate its capacity to implement and sustain its own development. This is sometimes called "total participation". Such community action ensures that planning and decision-making remains at the settlement level; the professionals then perform mainly advisory and regulatory roles.

*The contrast between the two models of interaction is a simplification of what happens in practice. Not only will the planning strategy determine the degree of participation by the community, but also the very nature of the tasks in the development of a project will afford opportunities for different kinds of participation.*

- ? a. What would be the right moment to start strengthening vulnerable buildings?  
 b. How can building regulations be applied to unsafe buildings that are in use?

key Project implementation.

### Topic 1.4 : Self Help and Quality Regulations

Self-help is the only viable route for most people in solving their housing problems in developing countries. The need of quality control must however be accommodated.

Many urban dwellers bring with them a self-build tradition. In its original, rural context, this tradition may be very conservative in the eyes of outsiders. In the urban context, however, self-built housing is forced to become much more inventive and innovative, using new materials and solving new problems.

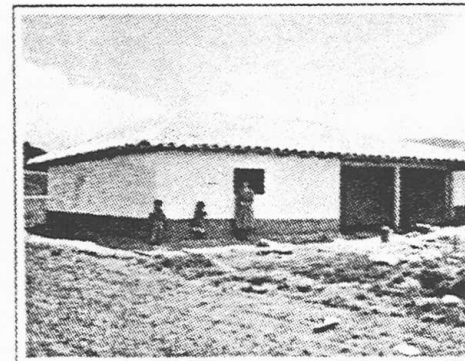
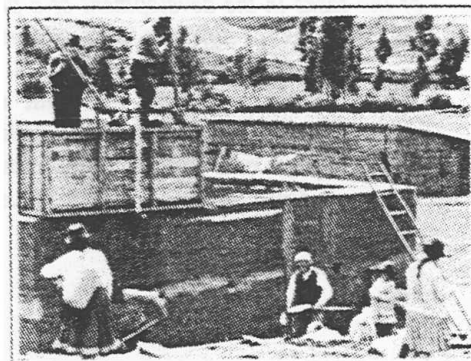
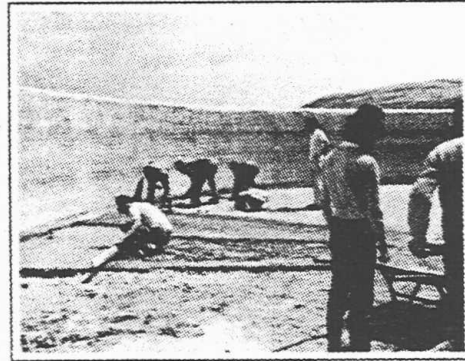
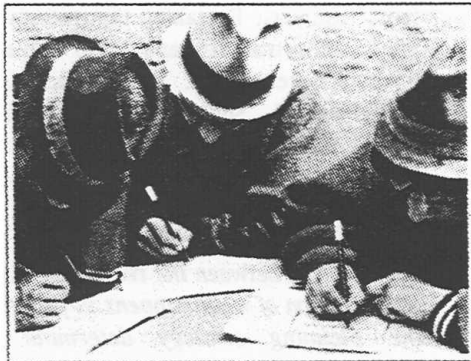
But they often find that improved building materials and techniques still do not pass the strict building regulations. If techniques and materials do not meet the standards there is no hope of securing a bank or building society loan.

Low income groups often live in fear of having their homes bulldozed, and there is thus little incentive to work collectively at lasting improvements or permanent upgrading. This is a fundamental problem. It is compounded by the problem of regulations. Existing building regulations are often so unrealistically high that they are an obstacle to urban improvement and low-cost housing. Consequently building regulations are widely

Basic safety regulations must be developed within the context of self-help housing and this is a challenge for technicians: closing the gap between self-help housing and safe structural methods is a priority. Only thereafter one can hope to agree on safe but affordable building regulations.



Self-help; building regulations; safety standards.



**Figure 1.4.1** Community participation in Ecuador: the population participates actively in all stages of a project that promotes earthquake resistant building techniques.

## SESSION 2: PARTICIPATION

### Topic 2.1 : Community participation

Upgrading for disaster reduction is in no way different from other settlement upgrading schemes. The problems and solutions applied within other fields of housing are therefore also relevant to upgrading of buildings.


Community participation is an indispensable element in upgrading if the community is to have responsibility for improving the houses.

In an upgrading project, unlike a conventional housing scheme, the target population is already on site, and it is necessary to involve the community in the preparation of the regularization and upgrading plans. Without active cooperation, plans cannot be implemented. Moreover, in view of the magnitude of the housing problem, no government is in a position to finance, on its own, the regularization and upgrading of all settlements in urban areas, and communities, therefore, pay all or most of the costs of upgrading projects.

In the context of settlement upgrading, community participation can be defined as the voluntary involvement of beneficiaries in contributing to the execution of the project, in sharing benefits and in making decisions to set goals, formulating the project and preparing and implementing the plans.

*Large scale building upgrading schemes require a close collaboration between authorities, technicians and communities.*

- ? a. There is usually considerable resistance from dwellers when upgrading programs are proposed. Can you list their objections?
- b. How can these be overcome?

 Community Participation-definition; upgrading-community participation.

### Topic 2.2 : Reasons for community participation

Planners may wish to promote community participation in projects they are involved in and need to be aware what can be gained from participation.


Reasons for community participation are

1. The opportunity for people to participate in projects which affect their lives is a basic principle;
2. Participation improves project results because dwellers have a sense of commitment to their own projects and a willingness to follow up.
3. Participation stimulates self-reliance as people who are participating in their own projects will be confident about solving problems and less dependent on outside agencies.

*Community Participation results in*

1. *Effective use of resources available in the settlements,*
2. *Affordable neighborhood conditions for people with low incomes.*

- ? a. Is it difficult for skilled workers to work together with unskilled community members?
- b. How can you achieve good maintenance after promoting self-help improvements?

 Community participation, self reliance.

### Topic 2.3 : Concept and process of participation

Training is meant to develop the skills of those who work to involve disadvantaged communities in construction and upgrading.

The governments of developing countries are seeking to provide or improve shelter for the rapidly growing numbers who urgently need it and have found participation a key strategy.

Community Participation refers to any kind of activity which is undertaken by the residents to improve their own living conditions-in collaboration with government, donors or non-government organizations.

The "participants" are all those involved in processes of settlement development. On the one hand are the residents; on the other hand are the professionals-planners, officials, housing officers, development workers-all with their own special expertise.

Within any community, there will be a range of experience, skills and resources among the residents. The ideal is for each to participate according to his or her abilities. In reality, however, not all will contribute, and, in some communities, the collaboration with professionals will be largely left in the hands of representatives or local leaders.

*Participation as a concept is essential in settlement development, but its nature will differ for each situation.*

- ? a. Which organizations in your country facilitate communications between technicians and communities?
- b. What difficulties do you expect in the execution of structural upgrading by community members?

🔑 Community Participation; upgrading-community participation; construction-community participation.



Figure 2.2.1 Community participation is the only viable route for people in solving their housing problems in developing countries.

## Topic 2.4 : Steps in participation

When starting an upgrading project one needs to define the degree of community participation.

The variety of functions performed by residents can range from:

1. Needs assessment: expressing their opinions about desirable improvements, prioritizing goals, lobbying and negotiating.
2. Planning: formulating objectives, setting goals and criticizing plans.
3. Mobilizing: raising awareness about the settlement's needs and proposals, activating organizational structures within the community.
4. Training: participating in training activities to enhance construction or maintenance skills
5. Implementing: engaging in administration, supervision or other management activities: contributing directly to the actual work of construction or maintenance; contributing cash, paying for services or membership fees.
6. Evaluating participating in the appraisal of work done and the redefinition of needs.

*There is ample scope for community participation at all levels of project development.*

- ? a. Water and sanitation projects have been promoted in low income areas in recent years. What lessons have we learned for the implementation of upgrading programs?

Key Upgrading-community participation; Community participation.

## SESSION 3: COMMUNITY BUILDING

### Topic 3.1 : Steps in Community-Based Construction

Community Participation in upgrading requires a careful selection and management process to ensure quality results. Minimum selection steps are necessary.

*Step 1: First identify the beneficiary:* Certainly at the start of a project communication between technicians, participants and beneficiaries is of critical importance. In order to gain control over events related to the project, beneficiaries should form a committee that acts as client. The committee should have regular open meetings to discuss the project, and communicate with the participants about the upgrading changes which it thinks appropriate. This committee should be involved from the inception of the project to its completion and later in the running and regular maintenance of the buildings. It is with this committee that the planner can check out ideas.

*Step 2: Link proposals to society and its culture:* What sort of society is it? What are its basic needs and how do people go about fulfilling them in work and play? What changes are people aspire to for the future?

*Step 3: Study local building traditions:* Try to find the best examples of local building methods to identify the skills and materials that are employed and can be used in upgrading techniques.

*Step 4: Prototypes.* It should not be assumed that engineering drawings are readily understood. Models often better facilitate effective communications and serve as a focus for group discussion. Any new technology should be tested as a prototype and adapted. The aim should be for problems to be identified by the user group, and potential solutions to be tested jointly by technicians and users.

*Step 5: Training courses:* Because of the community's familiarity with traditional technologies, communication with the development worker and the incorporation of new improved building skills within training programs is easier. Training not only encourages self-help, but also provides authorities cost-effective encouragement of improved building skills and standards.

*Step 6. Economy:* The part played by cash in the economy within the target community should be established. Another question to be answered is the

tradition of local money-lending.

*Good communication skills by the development worker is essential to the task of community building in relation to new techniques, and encouraging user-participation in design.*



Upgrading-community participation: construction-community participation.



### Topic 3.2 : Participation stages in upgrading

Participation has cost and mobilization advantages. There are however several constraints that have to be considered.

Upgrading projects consist of five stages:

1. Assessing damage and vulnerability;
2. Developing an upgraded design;
3. Upgrading of houses;
4. Construction of infrastructure; and
5. Extension of services.

Participation in upgrading projects can take the form of self-help, mutual self-help, or by hiring skilled labor. The idea of self-help construction was introduced in the 1950s as a means to reduce the capital cost of housing for low-income groups. Self-help reduces costs as building materials can be purchased in bulk and specialized labor can be hired more cheaply. It also contributes to the creation of strong communities.

In a well known housing project in Thailand the selected participants were divided by lottery into teams of 16-20 families, but the skilled participants (carpenters and masons) were distributed equally among them. The size of the teams enabled the participants to divide the labor among themselves and to specialize in a few building activities, while the project had a training component so that the participants could learn simple building techniques. This obviously has its limits as it is not worthwhile teaching building skills to all participants. The cost of training and supervision may then well exceed the value of the labor contributions.

In a Zimbabwean scheme however participants were reluctant to build as they feared that building inspectors might reject their work and order demolition. They preferred a skilled contractor to build a good house meeting building standards than to construct on a self-help basis and see it demolished afterwards. They relied in particular on specialists to carry out jobs requiring skilled labor. So, the consolidated houses in low income settlements are often built by small contractors, after the dwellers have made the initial small improvements over a period of many years.

The second problem of self-help construction concerns time constraints. Advocates of self-help construction assume that most urban poor are unemployed or underemployed and have ample time. In fact, many low-income families are employed in an informal manner and cannot find the time to construct or repair their houses

Proper financial management of the building group poses a third serious problem for the participating members.

as they lack administration and book-keeping skills and often cannot bear the responsibility of handling large amounts of money. Closer analysis reveals, however, that this skills are taken up differently within the so-called 'informal sector' of the urban economy. Plans have to be developed to meet the exigencies of the above mentioned problem.

*What is important is not the dwellers' contribution in labor to the construction of the house, but his control over the construction process and his participation in planning and decision-making.*

- ?
- a. Whereas in middle income areas fire damage has decreased tremendously in recent decades, in low income areas it seems to be on the rise. Why?
  - b. What are the conclusions for upgrading schemes?

Key Self-help; upgrading-community participation; informal sector; Thailand; Zimbabwe.

## SESSION 4: HOUSING FINANCE

### Topic 4.1 : Financing methods in housing

Low income groups need external financing to be able to participate in upgrading programs. There are three methods for financing the building and upgrading for low income housing -in public and private sectors and sometimes a mixture is used: formal, semi-formal and informal financing.

#### Formal Financing

The financing of housing in the public sector comes from Planning and National Development Funds. The Treasury channels funds through ministries concerned, which pass them on to various parastatals, local authorities and housing finance institutions.

Private sector financing of housing comes from banks, financial institutions for housing, building societies, life insurance companies, savings & credit cooperative societies and individuals. Sometimes companies provide loans to their employees, or start employee cooperatives for credits and savings. International agencies may provide loans to governments for financing of housing.

#### Semi-formal Financing

The provision of money by legally constituted bodies without the formal statute of registered loans, such as employee cooperatives, revolving welfare funds and building groups. Housing cooperatives to mobilize members savings on a community basis also operate in this sector.

#### Informal Financing

Finance with no legal basis or even written agreements are the funds within family, friendship or employment networks to mobilize resources. In low-income groups this form of financing is common. In some low income areas informal financing was found to account for 72%, semi-formal for 10 % and formal financing for 18 % of the total.

*When initiating upgrading programs the funding aspects must be planned with the above information in mind. Informal financing presents itself as the principle option.*

- b. Which informal housing finance possibilities do low income people use here?
- c. Is it the family or are there wider ranging community institutions that share burdens?
- d. What proportion of its income does a family normally spend on its home?
- e. What might a community group be asked to contribute towards the project in cash or labor?



Upgrading-Financing; Housing finance.

- ?
- a. Are there to your knowledge any formal funding sources in this country that you could tap for upgrading in low income areas?

## Topic 4.2 : Participation in financing upgrading

Low income households are generally not in a position to pay the costs from their own savings. Therefore upgrading projects should provide or arrange loans

Of all participatory activities in upgrading projects participation of beneficiaries in the financing is the most basic, since it commits the low-income families for many years. Financial arrangements between community members and the project should be kept flexible and simple, so that they are adapted to the needs and resources of the people. The beneficiaries are generally not in a position to pay the costs from their own savings. Therefore upgrading projects should provide or arrange loans. As a form of government or insurance incentive interest rates may be set somewhat lower than those currently prevailing. Upgrading projects must for this reason include funding arrangements for which professional finance managers must take responsibility.

A loan for *building materials* is sometimes provided in kind from the project store, which not only guarantees the loans purpose, but also facilitates construction management. The price of building materials from the designated project store can be lower than the market price, because the project purchases the material in bulk and does not take any profit.

Normally, loans have to be paid back in monthly instalments over a period of between 10 and 30 years. Although repayment of loans over such an extended period of time seems to be the most suitable arrangement for low-income families, the duration and the regularity of the payment may pose serious problems to many urban poor. Events such as weddings, sickness and death will at times cause interruptions of payments. The recovery of a loan from beneficiaries through monthly instalments is often the most difficult part in the execution of an upgrading project. Two issues should be distinguished with regard to cost recovery: the willingness of the community members to pay; and the collection method. Some low-income families, therefore, prefer to reimburse the loan as soon as possible. The fact that a family is able to do so is not necessarily an indication that it does not belong to the low-income category.

Given the uncertain income situation of many low-income families, defaults in repayment of loans can hardly be avoided. The authorities should therefore apply the rules in a flexible manner, otherwise, the lowest-income groups will particularly suffer. However, the project staff could encourage organization of savings groups. In many countries such schemes have

successfully been implemented in housing schemes and are therefore known and accepted. The mutual support and the social pressure within such groups are key elements to the success of such schemes.

- ?
- a. What housing finance options are there in your country for low income people?
  - b. Do you know of informal housing finance and saving schemes?



Upgrading-financing.

