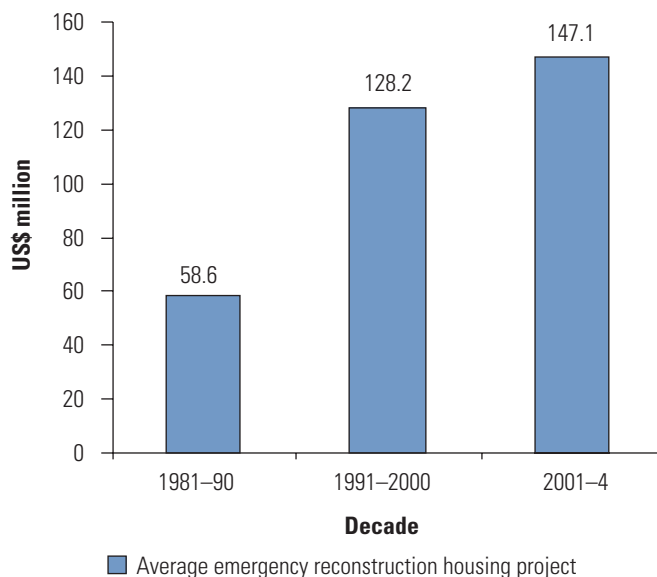


## APPENDIX H: HOUSING AND SHELTER

All sudden-onset disasters can create a need for temporary or medium-term shelter. Several approaches to shelter have been taken in the emergency context—building emergency shelters, relocating victims to safer areas, and facilitating self-help construction of temporary shelter while simultaneously preparing to house the homeless with housing reconstruction components. Where it has not been feasible or desirable to relocate people, the Bank has supported activities that set up shelter on site and strengthened warning systems. For example, in Bangladesh, the Bank has funded the construction of cyclone shelters, which have provided Bangladeshis at risk with a place to go during severe storms. Sea-level monitoring and warning systems were also implemented.

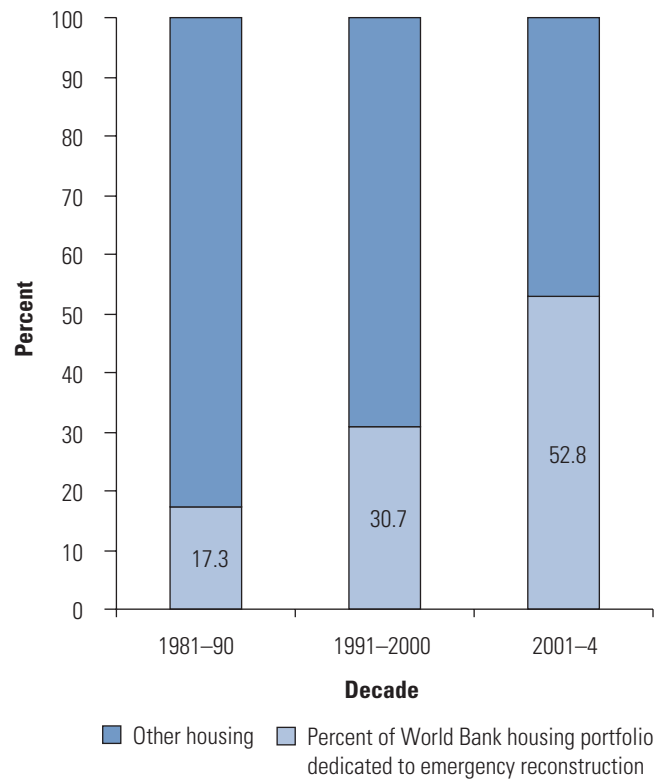
The study identified 46 reconstruction projects involving housing. Of these, 44 were rated by IEG as satisfactory (95.6 percent). Through the years, natural disaster-related housing projects have been growing in both number and size (see figure H.1). The average loan size of the 8 projects implemented in the 1980s was \$58.6 million. Twenty were implemented in the 1990s, and the average cost was \$128.2 million. In the first four years of this decade, 14 projects have been completed, with an average loan size of \$147.1 million. Eleven more are ongoing. The total amount of funding and the share of the overall housing funding they represent are also growing (see figure H.2).

**Figure H.1: Average Emergency Reconstruction Housing Project Size Is Growing**



Source: World Bank data.

**Figure H.2: Funding for Emergency Housing Is Claiming a Growing Portion of Overall Funds for Housing**



Source: World Bank data.

### Emergency Shelters

Along low-lying coastal plains, which are particularly subject to tidal surges when tropical storms coincide with high tides, storm shelters have the potential to save thousands of lives. It is not necessary to construct shelters for everyone, and there is probably no country where there is a sufficient number of these shelters because other alternatives—such as escape roads leading inland and/or to higher ground—allow the more mobile to move themselves to safety. Seven Bank-financed projects built cyclone shelters between 1984 and 2003 (see Background Paper available upon request). The total number of cyclone shelters planned at appraisal was 624, and 524 have been built by projects that are now closed (see table H.1). In two ongoing projects a cyclone shelter program was also planned, but no figures on achievements to date have been provided.

### Dedicated versus Multi-Purpose Shelters

To improve shelter maintenance prospects, the Bank moved from building dedicated cyclone shelters to building multi-use cyclone shelters that were used primarily as schools. When it became apparent that school could not be interrupted for weeks or months on end because those made homeless by a disaster were using it for a shelter, the Bank focused more on creating shelters that were also used as community centers or local government buildings, so as not to interrupt studies for prolonged periods of time. Not being able to send children to school also caused unanticipated child care burdens for the family. Another strategy, which has been discussed but not yet put in practice with Bank financing, is to enable lower-middle- to middle-income families to build multi-story cyclone-resistant homes. In the event of a disaster, these structures could save the lives of poorer neighbors with nowhere to go.

**Table H.1: Cyclone Shelters Financed by the World Bank, 1984–2003**

Country	Approval fiscal year	Cyclone shelters planned	Cyclone shelters constructed
Bangladesh	1972	260	238
India	1991	187	182
India	1997	140	82
St. Lucia	1999	23	12
Dominica	1999	6	5
St. Kitts and Nevis	1999	8	5
Grenada	2001	No figures	No figures
St. Vincent and the Grenadines	2002	No figures	No figures

## Relocation

In the distress following major disasters, politicians are often eager to promise relocation to victims. World Bank support is welcomed to help realize these promises. Over the last 20 years, people rendered homeless by natural disasters or living on at-risk land were relocated in 30 of the projects in the study database, with varying levels of success.

A review of those projects shows that in 20, people were relocated to a safer area. A lack of technical expertise coupled with victims' anxieties and opportunism led to a suboptimal result in seven projects (all earthquake-related). In four projects, the area that disaster victims vacated received a higher value once they were gone.

An increase in land value, however, was not always at the expense of the economically most vulnerable. After the Lijiang earthquake in China, high-rise apartment complexes were torn down and single family houses in a traditional style constructed. This helped Lijiang to be accepted by UNESCO as a World Heritage Site, which increased the city's attractiveness for tourists. It could therefore be argued that even families that had to leave the area and resettle at the city's periphery may profit from this project in the future.

By relocating families through these projects, their vulnerability was reduced in almost all of the cases. However, in 24 cases, relocation sites were quite distant from the original settlements, and commercial transport costs were therefore involved. For instance, in India's Maharashtra

Emergency Earthquake Reconstruction Project, some villages were relocated so far away that peasants gave up farming because they could no longer reach their fields.

In 7 of the 30 projects, resettled people moved back to their former location, either to go back to where their roots were, or to cash in their benefits by selling their new home and moving back to the hazardous area. In one case (Brazil 1988), new squatters settled into areas vacated by disaster victims. In some cases, project planners have designed ways to discourage people from moving back by creating parks and recreation areas in the vulnerable area (Honduras 2000) or having families sign contracts confirming that they would live in

### Box H.1: Highly Successful Relocation in Brazil

The Rio Flood Reconstruction Project in Brazil was strongly poverty-oriented and benefited several hundred-thousand low-income families. Measures were taken after the 1988 flooding to relocate the estimated 3,428 families away from flood-prone or drainage work areas. The resettlement component itself was successfully implemented despite a number of delays. One study done immediately after resettlement indicated that the living standards of 95 percent of the relocated families had improved substantially. A follow-up study done four years later indicated the same results, with 80 percent of respondents reporting that they were better off after resettlement.

Source: IEG project database.

their new homes, which they built through self-help, for at least five years (Argentina 1993).

A well-known drawback to relocation is the difficulty in preserving social networks in the process. Of the 30 cases reviewed, only one successfully preserved social networks, confirming the pattern identified by the (2005) IEG study, *Putting Social Development to Work for the Poor: An IEG Review of World Bank Activities*. In one case, focus groups reported that the major reason that beneficiaries had not moved to the assigned house was that they did not want to leave their original neighborhood. The Beneficiary Analysis performed by the project reports: “Beneficiaries reported a strong preference for rebuilding their own damaged houses, rather than moving to the assigned houses in new

neighborhoods. Moving meant dissolving social networks that often had generations of history.”

In most cases people tended to be pleased with their resituated homes. In 17 projects for which information was available, a majority of beneficiaries reported being satisfied with their new home, or team leaders judged relocation a success, while in 9 projects this was not the case. When a majority is satisfied with a project, one can forget to pay special attention to a minority of often very poor families that might not have fared as well.

Whatever the positives of each case, relocating people usually has downsides: the disruption of social networks to some degree is unavoidable (because changes in the built environment inevitably change interaction patterns); it is bound to interfere with some families’ livelihoods; and it results in the abandonment of existing infrastructure. When relocation is unavoidable, the Bank may choose to work with NGOs and other partners to ensure that communities’ social cohesion and livelihood are preserved.

## Housing

From the Bank’s perspective, the goal is to help the disaster homeless get back on their feet as quickly as possible, while focusing on the poorest and encouraging mitigation measures to help reduce the impact of future disasters. Help to the disaster homeless means addressing a range of needs to help them piece their lives back together.

The publication “Doing More for Those Made Homeless by Natural Disasters” (World Bank DMF 2001) stresses that emergency efforts to help the homeless should avoid undermining good housing sector policies, and always seek to incorporate best practice prescriptions of such policies whenever possible. And emergency housing reconstruction efforts should always embody the Bank’s priority concern with benefiting the poor, by providing priority assistance to those unable to afford housing by other means. Looking at the disaster project database, 98 projects made a direct impact on the poor. The most frequently cited activity in this group of projects was the

### Box H.2: Relocation, If Not Carefully Planned, Can Lead to a Second Blow—The Loss of Social Support Networks

In El Salvador, families that had lived together in apartment buildings before the earthquake had developed patterns of interaction based on an established level of trust. They had spent years working out ways of managing things such as childcare, laundry, and holidays; there was a formal and an informal leadership structure.

When they were relocated, no effort was made to keep social groupings together. Even under the best of circumstances, taking people from an apartment complex (where there had been a landlord involved with building maintenance) and making them owners of condominium units was going to be a challenge. Putting together families that did not know each other made the adjustment infinitely more challenging.

Source: IEG project database.

### Box H.3: The Extremely Poor Remained in Tent Cities

In the Turkey Emergency Earthquake Recovery Project, most of the over 115,000 families that received accommodation allowances were satisfied with their new homes. Some 3,000 extremely poor families, however, remained in tent cities because they were unable to successfully complete the process that would qualify them for temporary shelter or permanent housing. No solution had been found for these homeless victims by the end of the project.

Source: IEG project database.

provision of housing or infrastructure services (33 of 98).

### **Temporary Housing**

The Bank has also supported temporary housing for disaster victims and has learned through that process that such shelters are sometimes occupied for long periods of time, and often become a part of the permanent housing stock. With this in mind, projects have begun to build temporary shelter to slightly higher standards so that they could then become another form of housing for the poorer once the new housing is built.

### **Sites and Services**

One approach the Bank has taken in sites and services projects is providing beneficiaries with a “wet core” of plumbing in cooking and bathroom facilities and having them invest in building up around that start. The approach has met with mixed success, in part because without a place to sleep, beneficiary families find it difficult to move to the site.

In El Salvador, following the earthquake, the sites and services aspect of the project met with poor initial acceptance and was not built. The

sites and services component of the Popayan, Colombia project met with considerable success, however. The project’s infrastructure components, which carefully targeted poor households, had a lasting positive impact on urban development. The social situation after the earthquake was explosive: landlords could not repair low-income apartments cheaply enough to charge rents that the poor could afford. For the first time, Popayan experienced land invasions—a result of 24,000 people becoming newly homeless. The project helped to defuse the incipient squatter problem by providing funding for the acquisition of land and a strong sites and services component. Seventeen new neighborhoods were created in which marginalized people received legal title to plots of land. Nearly a decade later, results are excellent.

### **Multi-Story Housing Complexes**

Another approach has been building housing units outright. This relatively expensive approach has been taken for middle-income families and for low-income families. Difficulties have been faced in some projects because relocating peo-

#### **Box H.4: El Salvador**

Several factors made cost recovery difficult in the housing component of the fiscal 1988 El Salvador earthquake project:

- Beneficiary selection specifically targeted low-income families affected by the earthquake.
- The difficult post-disaster context meant that repayment was especially challenging. Many housing recipients had just suffered a disaster, with loss of personal possessions, medical or funeral expenses, and temporary loss of employment.
- The cost of screening applicants and administering the loans was considerable, and it was passed on to the beneficiaries.
- The actual price of the homes rose during construction.

It turned out that the monthly payments on the project-provided homes were too expensive for the intended beneficiaries to repay. This is reflected in the low levels of repayment at the original loan

amount and term. Not only did the financial institutions suffer, NGO staff estimated that half of the original families had been obliged to move out, many having forfeited years of mortgage payments.

When the IEG mission visited in October 2003, the families who had been able to keep up their original payment plans had paid off their loans. Those who fell behind were offered the opportunity to refinance, but when the accumulated interest was incorporated into the principal, a higher rate was applied, and the term significantly extended. Thus, many original families are still paying back their loans. But they are complaining bitterly and they have created associations to lobby the government for loan forgiveness. Numerous association members have stopped paying, although some credit agencies (including successors to those that went bankrupt because of the repayment levels) forcibly evicted delinquent mortgage holders and resold the units, according to families interviewed.

Source: IEG project database.

ple from different places into one complex dislocates people from their jobs and their extended families, breaking up social support networks. The sheer numbers of people needing to be housed have been daunting in some cases.

Also an issue is the difficulty beneficiaries might have keeping up with maintenance of units handed over (even if unit was free). Reaching a balance between size and need has been difficult, especially because units tend to be standardized for cost control reasons, and then turn out to be poorly suited to large families. Whatever beneficiaries see as “excess housing,” they will then rent out or sell off. Some argue for giving cash for repairs of the old house, or for issues that are a higher priority to the poor, and skipping the house building step.

Since the North China Earthquake Reconstruction Project was implemented, production and living conditions in the earthquake-stricken areas have not only recovered but improved. Before the project, most of the people lived in small, dark adobe dwellings with poor earthquake resilience. After the project was implemented, families in the project villages moved into new permanent houses that are large and bright.

### Cost Recovery

Cost recovery is a contentious issue in the context of the Bank’s post-disaster housing work.

While cost recovery may be a goal in regular lending, having such expectations in the difficult post-disaster context may be too optimistic, or perhaps even counterproductive.

Certain situations have seen success, but most projects aiming for cost recovery have experienced mixed results. Expecting beneficiaries to pay for project benefits after having just suffered a disaster—likely including the loss of personal possessions, medical or funeral expenses, and temporary loss of employment—is perhaps not realistic. Expecting cost recovery from those most likely to have difficulty paying for services or repaying loans exacerbates their situation, and may not be a viable political decision either. Or, when cost recovery is a priority, the poorest can be bypassed because of their inability to pay. Add in administrative costs, the limited experience of the poor with receiving credit from formal sources, the seasonal income situation of the poor, and obligations to pay penalties for missed monthly payments, and cost recovery can quickly move from difficult to impossible for all involved.

Bank-financed housing projects have taken different tacks with respect to cost recovery. In general, efforts have not been successful. In the case of the El Salvador Earthquake Reconstruction Project, housing beneficiaries were chosen according to their income status, creating a homogeneous beneficiary pool of low-income families. The screening was successful, the houses were built, and the beneficiaries were housed. The cost of the houses was more than planned, and more of a subsidy had to be given to each one as a result. Then, there were miscommunications as to the payback of the loans, after the beneficiaries had already agreed to a given scenario. Suddenly they were expected to repay more than anticipated. All of this set up a situation in which the people carefully screened to be beneficiaries were unable to pay, and the banks funding the houses all went under because no one repaid their loans. Later, households delinquent on their loan payments were evicted and a new payment plan was adopted.

#### Box H.5: Very Large, High-Quality Post-Disaster Housing—Mexico City

Most of the homes wrecked by the earthquake were typical of the “vecindades” that housed Mexico City’s poorest families—inner-city tenements where 20 years of rent control had left housing overcrowded and in ill repair. The project had a substantial effect on Mexico’s disaster awareness, and the city, particularly its poorest residents, will not be as vulnerable to the next natural disaster. The substantial housing component rehoused some 78,000 families at a reasonable cost in housing of a quality rarely found in the public sector, or in private housing for low-income families, anywhere.

Source: IEG project database.