

Chapter 2.

Managing the Constraints

SOME REASONS FOR LIMITED BANK INVOLVEMENT IN THE PAST

2.01 The potential market for assistance in housing reconstruction following natural disasters is huge. While Bank responses have been important in particular cases, they were generally less than expected according to Bank staff interviewed for the current study. This chapter reviews reasons—internal to the Bank itself—for the limited response and discusses how these constraints can be best managed. Three levels are discussed here (see Table 2.1): (i) policy constraints, where Bank directives—not necessarily concerned exclusively with housing reconstruction following natural disasters—can undermine Bank efforts in this field; (ii) project design constraints, notably unclear guidelines for task teams on priorities and standards; and (iii) operational constraints, again related to lack of guidance; this time on the achievement of good practice on the ground.

Table 2.1 Bank Constraints on Assistance for Homeless Victims of Natural Disasters			
	A. Policy	B. Project Design	C. Operations
1.	Bank policy on Involuntary Resettlement (OD 4.30/OP 4.12)	Lack of clear criteria for selecting priority beneficiaries in face of overwhelming demand	Different approach needed to high-drama design/preparation tasks from the long-haul supervision effort.
2.	Bank Housing Policy Paper (HPP 1993)	Designers' frustration at not helping the poor unaffected by disaster, who otherwise equally deserve support.	Staff skills in housing are dispersed across the Bank.
3.	Bank requirement of cost recovery	Absence of Bank guidelines for post-disaster housing standards, mitigation and insurance.	Determining accurately on the ground exactly who eligible disaster victims are
4.	Bank priority for investments in public goods, not private goods such as housing	Risk of weak control systems in hastily prepared projects, opening them to possible abuse subsequently.	Implementation capacity constraints of borrower and executing agencies.
5.	Fear of undermining long-term policy goals through ad hoc exceptions.	Designers' frustrations at being unable to provide relief to help solve victims' shelter immediate needs.	Urgent but ad hoc matters distract attention from performance monitoring during implementation.
6.	Possible disruption to Country Assistance Strategies (CAS)	Victims' lack of cash precludes their incurring expenses for later reimbursement as per Bank norm.	Keeping control of disbursements in difficult circumstances during implementation.

MANAGING BANK POLICY CONSTRAINTS

2.02 When asked about Bank policy constraints on their work in housing reconstruction after natural disasters, Bank staff refer most often to three Bank policy documents, some of which have already been mentioned in this report: (i) OP 8.50 of August 1995 on Emergency Recovery Assistance, (ii) OD 4.30 of

June 1990 on Involuntary Resettlement; and (iii) April 1993 Housing Policy Paper (HPP). At the time of writing, these Bank policies are at various stages in review processes, none of which appears to imply major changes as far as helping the disaster homeless is concerned.

2.03 Operational Policy (OP) 8.50 – Emergency Recovery Assistance (August 1995): This policy document provides guidelines for the *context* of emergency housing reconstruction. Its succinct two-and-a-half pages do not provide specific details about housing provision itself, but four of its key provisions apply as much to the emergency reconstruction of housing as to that of other buildings and infrastructure:

- **objective:** to restore assets and level of activity, rather than provide immediate relief;
- **context:** to take into account sectoral development strategies;
- **mitigation:** incorporate disaster resistant standards and mitigation measures;
- **operational policies:** normal policies on procurement, consultants and disbursements apply;

OP 8.50's call for restoring assets and activities to an economy disrupted by a disaster is the basis for the logic of the present review.¹⁶ The reconstruction of housing destroyed or damaged by a natural disaster can make a major contribution to such restoration. In its current form, OP 8.50 applies to all sectors, including housing. Chapter 5 of this document aims to provide some guidelines for interpreting OP 8.50 and other Bank policy statements for emergency housing reconstruction.

2.04 Operational Directive (OD) 4.30 – Involuntary Resettlement (June 1990): This OD, like current drafts of its impending replacement (*proposed* OP 4.12), explicitly exempts refugees from natural disasters from its provisions. Through rigorous attendance to overall planning and individual compensation, OD 4.30 seeks to guarantee the fair treatment of those displaced against their will through interventions such as development projects, but specifically excludes victims of natural disasters from its provisions.¹⁷ Those persons displaced by a natural disaster event, lose their homes and are forced to move due to an *act of nature*, to which concepts of *human* fairness or justice cannot apply. It therefore makes sense that disaster homelessness should be managed in a way that is beyond the remit of the Bank's policy on involuntary resettlement.

2.05 Placing victims of natural disaster victims beyond the reach of OD 4.30 on involuntary resettlement is an important policy exception, but it was not made explicit in the main text of the OD itself. Instead it was only through a small addendum to the fourth footnote of the document.¹⁸ The obscure location of this important policy provision may help explain why many Bank task teams and sector managers mistakenly believed that OD 4.30 does indeed apply in full to managing the relocation of homeless victims of natural disasters. It is also important to note that resettlement within a reconstruction project that is not directly related to the natural disaster itself—such as moving others to resettle the disaster homeless—would still be covered by the policy.

2.06 1993 Housing Policy Paper (HPP): With the sub-title "Enabling Markets to Work" this document remains, at the time of writing, the Bank's principal housing sector policy document. The HPP discourages the direct provision of housing by the public sector itself, instead proposing that governments adopt an

¹⁶ Other multilateral development banks have similar recovery goals for emergency reconstruction, even if the language used may vary somewhat. For the Inter-American Development Bank: "The main purpose of the (Inter-American) Bank's participation in the field of natural and unexpected disasters is to assist member countries in effectively protecting and resuming their socio-economic development" (IADB OP 704, March 1999). For its part, the Asian Development Bank supports Rehabilitation Assistance after Disasters "that are aimed at rapid restoration of infrastructure and production facilities subsequent to the disaster" (ADB Operations Manual Section 25, December 19, 1995).

¹⁷ At the time of writing, drafts of the revised OP 4.12 continue to make victims of natural disasters exempt from the policy.

¹⁸ The current draft of the revised OP 4.12 stays with the footnote format for this policy exemption.

“enabling” strategy so that private suppliers will be active in a more open housing market.¹⁹ Reading too far into the HPP prescriptions can lead a reader to believe that the policy proscribes government participation in housing provision altogether. According to Bank staff interviewed for this study, this interpretation has discouraged Bank sector managers and task teams from including housing components in natural disaster reconstruction operations.

2.07 A careful reading of the HPP, however, reveals that the policy reserves an important role for the public sector in supporting housing provision for the poor (HPP p. 60). Tasks teams designing emergency reconstruction projects can draw positive guidance—and encouragement to incorporate housing components—from the document, especially with respect to: (i) the need for subsidies to be transparent and well-targeted on the poor (HPP p. 65 and p. 69); (ii) infrastructure that needs to go with housing (HPP p. 65); (iii) the regulation of housing and land-use to prevent the reoccupation of unsafe disaster-prone areas (HPP p. 50); and (iv) the need to always look at the housing sector as a whole, given that major reconstruction efforts in particular can have major impacts on the entire housing market (HPP p. 61).

2.08 The HPP therefore needs to be studied carefully by reconstruction project task teams, since there is no explicit reference to emergency reconstruction itself in the document’s sector policy. Some sector specialists in the Bank believe that an update of the housing sector policy is overdue. In revised form, no doubt, it would address issues of emergency housing reconstruction more explicitly. In the meantime, task teams can draw from good practice recommendations of the HPP in designing housing reconstruction projects, without going so far as to initiate sector policy changes or innovations during the unpropitious moments of catastrophe following a natural disaster. *Recovery* must be the first priority, without undermining good housing practice or sound long-term sector policies.

PREVAILING OVER PROJECT DESIGN CONSTRAINTS

2.09 In emergency housing reconstruction project preparation, therefore, Bank task teams should focus first on the *recovery* objective of the operation. Success in helping the recovery of the most needy calls for clear guidance to these teams as they help borrowers determine priority beneficiaries in the face of overwhelming demands that typically follow a large-scale natural disaster. Project design work can be simplified by focusing precisely and purposefully in two stages: first, exclusively on actual victims of the disaster and second, on the uninsured poor among those victims. While equally deserving of the Bank’s attention in its fight against poverty, the urban and rural poor unaffected by the natural disaster—sometimes called the ‘structural poor’—should be assisted through regular development projects, and *not* through emergency reconstruction operations. Task teams’ frustration at having to (temporarily) leave aside the legitimate aspirations of the structural poor untouched by a disaster can be tempered if teams focus more narrowly on the *recovery* objective and acknowledge that regular development programs and projects are the appropriate instruments to assist these vulnerable groups.

2.10 For emergency housing recovery, the Bank has no single set of guidelines about the standards for house building itself, or for disaster risk mitigation and insurance. Diverse country circumstances would require that these be determined on a case-by-case basis across regions. Task teams themselves can decant some good practice standards from the Bank’s previous experience with 37 housing reconstruction projects, summarized briefly in this report (details in Chapter 3).²⁰ For help with efforts to enhance insurance

¹⁹ Inter-American Development Bank Urban and Housing Development policy is more friendly toward providing assistance to programs and projects that directly improve the housing conditions of the low-income population (IADB OP-751 “Urban and Housing Development” June 1995). Eligible fields of activity include basic core housing, sites and services, upgrading existing low income settlements and housing, and transparent and well-targeted subsidy schemes.

²⁰ Chapter 3 summarizes the projects that can be researched one-by-one in Bank archives. More summary information is available in: Gilbert, Roy and Alcira Kreimer (1999) *op.cit.* pp. 20-29. An important website sources include that of the Bank’s Operations Evaluation Department (OED) which provides evaluation reports on-line that include completed housing reconstruction operations (<http://wbln1023.worldbank.org/oed/oeddociib.nsf/intrapaneame/urbancluster>). For

coverage of catastrophe risk—where Bank experience has been more limited—task teams can seek advice from the Bank's Financial Sector Development Department.

2.11 To reduce the risk of hastily prepared projects suffering political abuse and corruption, it is important for task teams to incorporate tight management and financial controls into project design. While an anti-corruption focus might appear heartless to some project designers in the tragic aftermath a natural disaster catastrophe, detailed and rigorous auditing arrangements for project implementation can help ensure that valuable assistance goes to where it is most needed.

2.12 Designed as a recovery operation focused primarily on the poor, task teams will probably have to give close attention to a project's cash flows. Destitute poor victims will need financial assistance from the outset and will be unable to incur up-front expenditures that are reimbursed only later. Project design will therefore need to incorporate and encourage up-front financing through the use of special accounts and retroactive reimbursements.²¹

OVERCOMING OPERATIONAL CONSTRAINTS

2.13 Even with a well-designed project, it will be vital throughout implementation for task teams to foster interest and sustain the sense of urgency inspired by the emergency event among all parties. Experience shows that, as the memory of the drama and tragedies of a disaster event fade, the energy behind a reconstruction effort can dissipate. Successful implementation of a project requires diligent supervision by dedicated staff in for the long haul, long after media interest in the disaster event has dissipated.

2.14 Staffing issues may constrain Bank response to housing reconstruction needs after natural disasters in some regions from time to time. The Bank has important staff resources with expertise in housing, but these are disseminated throughout the organization, and may not always be available to assist with every emergency. To meet growing demands for assistance with emergency housing reconstruction, therefore, it might be necessary to seek outside sector experts with substantial practical on-the-ground experience to assist Bank task teams.

2.15 During implementation, task teams will have to redouble efforts to ensure that the eligible disaster victims—particularly the poor—truly are the beneficiaries of the project. As well as careful monitoring, this will require that supervision missions listen closely to borrowers, NGOs and the intended beneficiaries themselves to verify that assistance is reaching the disaster victims it intended to help.

2.16 Capacity constraints of a borrower's own executing agencies may be an important factor in limiting the scale and rhythm of implementing an emergency reconstruction project, especially in countries with weak systems of governance and limited institutional development. While this constraint itself is strictly beyond their control, it is important for Bank task teams to continuously monitor the implementation capabilities of executing agencies and accelerate or decelerate execution in accordance with that capability.

2.17 Ex-post evaluations of the performance of individual emergency reconstruction projects by the Bank's Operations Evaluation Department (OED) point to the need for more rigorous monitoring of implementation. A careful follow-up will help ensure that project resources are applied in an efficient way to the achievement of the intended outcomes. Task teams therefore need to devote considerable attention to ensuring that clear and simple targets and indicators of project outputs are always in the minds of those on supervision missions and that intended achievements in the form of recovery and development impacts are monitored continuously throughout implementation. If it focuses on controlling procurement and

guidance on natural disaster mitigation measures to include in a reconstruction project, task teams can consult the Bank's Disaster Management Facility (extranet url: <http://www.worldbank.org/dmf> or intranet url: http://www-int.worldbank.org/intranet/jsp/sectors_view.jsp?tab=2&gwitem=473929).

²¹ Recent project experiences reported by the Inter-American Development Bank have focused more on up-front financing, through cash payments to poor disaster victims in some cases.

disbursements too, such monitoring will also help ensure the diligent execution of a project, containing risks of its being hijacked politically or corrupted financially.

ENABLING AND FACILITATING: WHAT'S ALREADY ON THE TABLE

2.18 Despite all the constraints discussed thus far, there is already much in a Bank task team's toolkit that makes helping the disaster homeless a little easier than it otherwise might have been (Table 2.2).

Table 2.2 Existing Bank Standards that Facilitate Assistance for Homeless Disaster Victims			
	A. Policy	B. Project Design	C. Operations
1.	OP 8.50 clarifies that an ERL does not aim to resolve long-term macroeconomic or (housing) sectoral issues.	Certain long-term sector policy reforms made be put on hold, but not undermined in order to meet specific disaster requirements (but innovations and reform are fully resumed once economy moves back to normal functioning [OP8.50]).	Project identification, preparation and appraisal can be combined into a single mission (OP 8.50/8). A simpler MOP, rather than a complete PAD is prepared (OP 8.50/9).
2.	Victims made homeless by natural disasters are specifically exempt from Bank policy on involuntary resettlement (OD 4.30/OP 4.12).	Procurement rules allow Direct Contracting from a single source in an ERL (Procurement Guidelines 3.7).	Shorter time periods are assured for management approval (OP 8.50/9-10)
3.	Bank housing sector policy does not preclude the participation of the public sector which is invariably an important player in emergency housing reconstruction (HPP 1993).	Operational directives allow methods such as Limited International Bidding, and International Shopping, where ICB would be normal practice (OD 11.00 paras. 26 and 35).	Normally approved at a higher level, non-ICB contract amounts up to US\$25 million can be authorized by regional procurement advisors in emergencies.

2.19 On the policy side, the Bank provides some flexibility for task teams to determine the best way to help those made homeless by natural disasters. As discussed earlier, a number of policy requirements may temporarily be put on hold to enable Bank task teams to respond to natural disaster emergencies. Bank policy on emergency recovery makes it clear that the pursuit of the recovery of economic and social activities in the short-term is priority. Thus, housing sector reform and innovation—tasks for the medium and long-term—may be *temporarily* held in abeyance to facilitate the urgent task of housing reconstruction for the poor. This does not mean that Bank policy encourages emergency recovery actions—such as illegally overriding property rights or carefully elaborated building codes—that might do harm to medium and long-term policy goals undermine what has been achieved thus far. It simply means that Bank task teams are given the freedom to pursue recovery unshackled by any requirement to advance sector policy goals or reform.

2.20 In this way, the Bank does not abandon its long-term policy positions in relation to the disaster-affected borrower. It merely agrees to resume the pursuit of them once the emergency phase of the natural disaster recovery is over. Of course, a temporary waiver does not preclude the need for emergency housing reconstruction task teams to be familiar with sector policies for two reasons. First, much good practice emanating from long-term housing sector policies—notably with respect to complementary infrastructure and land use regulations—can and should be incorporated into the reconstruction effort. Second, task teams need to be very familiar with Bank housing sector policies in order to judge which policy abeyance is appropriate to the prevailing disaster-related needs

2.21 Bank task teams have similar some degrees of freedom with regard to addressing institutional development (ID) goals during the preparation and implementation of emergency housing reconstruction projects. While ID is not expected to be a central focus of these operations, a favorable ID impact—especially as far as the 'rules of the game' of disaster management go—should always be sought. Without foregoing the immediate and urgent recovery goals, opportunities should not be missed for achieving valuable ID impacts through these projects, even though formal Bank requirements are neutral as far as explicitly incorporating ID goals into project design. All Bank project and non-project interventions are expected to achieve some form of ID impact, even in the broadest sense of enabling conditions for the more efficient use of resources. At completion, OED routinely evaluates the ID impact of all completed operations, including those ostensibly aimed at emergency reconstruction.

2.22 On the project design side, Bank rules provide more degrees of freedom for task teams responsible for emergency reconstruction projects than for regular operations. Thus, for emergency reconstruction, the Bank can even finance temporary implementation units for coordinating or managing recovery activities, covering their incremental recurrent costs of procurement management and project implementation (BP 8.50 para. 8). Past experience has shown that, among borrowers afflicted by natural disasters, weak procurement management skills can be responsible for implementation delays. Where appropriate, project resources themselves can be used to strengthen this capability. Successful capacity building of this kind has been achieved through project financing intensive courses on procurement management for local staff and also funding the setting up of high quality monitoring and auditing services to be applied throughout project implementation.

2.23 Among those applicable during project implementation, Bank standards applying to procurement offer the most visible formal concessions to the special needs of executing emergency reconstruction projects. Whether procurement arrangements turn out to be flexible in practice will depend to a considerable extent on the teamwork and collaboration of procurement advisors and task teams in each case. The Bank is generous in allowing for special, less bureaucratically demanding conditions for emergency reconstruction. As well as permitting more flexible procurement arrangements, regional procurement advisors are given greater authority—vis à vis their own supervisors—over decisions relating to emergency recovery operations. Flexibility should not be abused, however, when it comes to the Bank fulfilling its fiduciary responsibilities. Bank procurement guidelines themselves remind us that "emergencies should not be used as a general argument for not resorting to ICB" (OP 11.00 para 30).

2.24 Administrative and processing norms also favor emergency reconstruction projects. Procurement teams in regional departments of the Bank are under instructions to process cases relating to emergency reconstruction expeditiously, placing them ahead of ordinary cases in the queue, if necessary. This makes sense. Poor victims who survive natural disasters can only begin to piece together their lives once basic services are functioning once again and such services need to be restored quickly through timely procurement, contracting and disbursement. Haste in processing should not undermine diligence and control, though, and be consistent with thorough analysis and review. Continual attention by procurement specialists is important to help prevent conditions propitious to fraud and corruption. For that reason, emergency reconstruction projects more than others should pay particular attention to implementing financial and technical auditing that are timely, detailed, and rigorous. It is important that the success of a prompt and appropriate response to the needy victims of a natural disaster is not undermined by careless arrangements for control that provide opportunities for unscrupulous parties to corrupt and undermine important achievements that can be made.

Chapter 3.

Bank Experience Thus Far

OVERVIEW OF BANK SUPPORTED HOUSING RECONSTRUCTION

3.01 Since 1980, the Bank has approved 117 natural disaster-related reconstruction projects. Of these, only 37 operations—nearly one third of the total—included components specifically aimed at rebuilding and repairing housing destroyed by earthquakes, flooding, windstorms and other natural disasters.²² The limited penetration of housing into the Bank's reconstruction work—when nearly all natural disasters lead to homelessness in some form—is a reflection of the constraints discussed earlier in this paper.

3.02 Of the 37 housing operations themselves, 32 were financed as Emergency Recovery Loans (ERLs) under OP 8.50 and its predecessors. The remaining five were normal development projects, part of whose funding was reallocated to help finance emergency housing reconstruction. To date, 23 projects have been completed and evaluated by the Bank's Operations Evaluation Department (OED), while 14 are still ongoing or in the process of closing.

3.03 On the whole, the performance of the completed projects was good with 87% rated with satisfactory outcomes or better. Three were even awarded OED's best overall outcome rating of *highly satisfactory*²³, while only three were given negative ratings.²⁴ None of the 37 projects was designed exclusively as a housing reconstruction operation, however. Housing was always one component among several others—such as infrastructure repair and disaster-related technical assistance—financed by the project. In recently approved projects in Europe and Central Asia (ECA) and the Middle East and North Africa (MNA), however, housing components account for almost two-thirds of total planned project expenditures.

3.04 Eight of these operations are relatively new ones, having been approved since fiscal year (FY) 1998. In no other period has the Bank approved so many housing reconstruction projects. Housing's much stronger presence in disaster-related reconstruction reflects renewed sector interest in two regions in particular, Latin America and the Caribbean (LCR) and ECA. Between 1980 and 1997, the Bank approved housing reconstruction operations only piecemeal, one or two at most per fiscal year. During five of the eighteen fiscal years during the 1980-1997 period, the Bank did not approve any housing reconstruction projects at all.

²² These projects were firstly identified from DMF's database of reconstruction projects, updated by keyword searches of documentation pertaining to the most recent operations. Preliminary lists of housing reconstruction projects were widely circulated among staff working in this field to reduce the risk of overlooking an important operation.

²³ China: North China Earthquake Rehabilitation Project (Credit 2091). This project was prepared and implemented speedily. The government put special coordination arrangements into place. Resettlement was avoided. New, earthquake resistant technologies and building materials were introduced. Yemen: Emergency Flood Reconstruction Project (Credit 2073). Efficient coordination by government's special and high powered Emergency Construction Unit. Rapid implementation notwithstanding difficult country conditions of alternating civil wars and union of Yemen and South Yemen. India: Maharashtra Earthquake Rehabilitation Project (Credit 2594). Key factors in the success were intensive community and NGO participation and the expeditious use of earthquake resistant materials and designs familiar to local artisans.

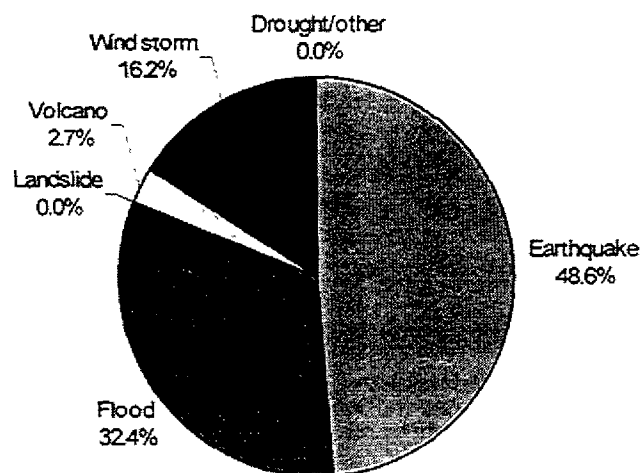
²⁴ Mexico: II Urban & Regional Development Project (Loan 1990); Nepal: Municipal Development and Earthquake Housing Project (Credit 1988); and El Salvador: Earthquake Reconstruction (Loan 2873).

3.05 There is evidence that temporarily at least, the 1993 Housing Policy Paper (HPP) may have contributed to an interruption of Bank support for emergency housing reconstruction. The Bank approved only four housing reconstruction projects during the four years following the 1993 HPP, against ten projects approved in the four-year period prior to the HPP. This fall is consistent with remarks by Bank staff, who reported being discouraged from supporting public sector housing programs with the advent of a sector policy that espoused, above all, a private sector approach to the sector.

3.06 Housing reconstruction projects ranged widely in size. Eight had loans of US\$200 million or more. Seventeen had loans in the US\$50-US\$200 million range, while for twelve projects, the loan amount was less than US\$50 million. All the emergency projects were designed—following OP 8.50 guidelines—to restore economic and social activities and to minimize the impacts of disasters.

3.07 What kinds of natural disaster did these projects respond to? Nearly half of them were in response

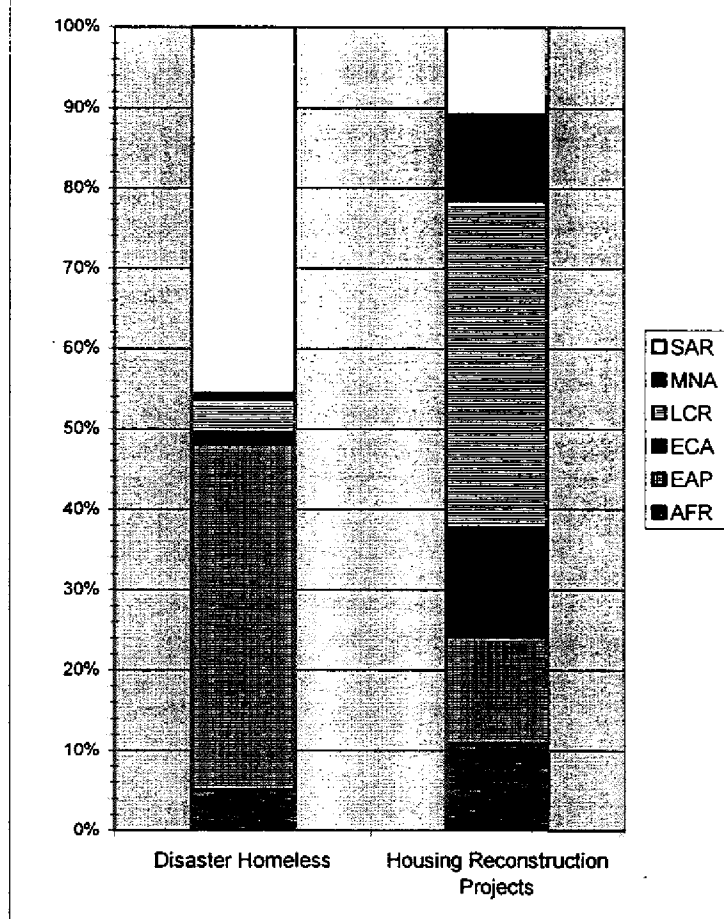
Fig 3.1 Natural Disasters addressed by Bank financed Housing Reconstruction Projects: 1980-2000



to earthquakes (Figure 3.1), a very large share given that earthquakes accounted for only 4.4% of the developing world's disaster homelessness (see Figure 1.1). Floods were the second most important cause of Bank disaster response through housing, accounting for one-third of the project portfolio (Figure 3.1), although it should be remembered that overall, floods account for *two-thirds* of disaster homelessness worldwide (see Figure 1.1). The portfolio's response to windstorm disasters—hurricanes and tropical cyclones, for instance—is more in line with the occurrence of homelessness through these phenomena. If need and demand are to play a bigger role in determining the level of Bank assistance for post-disaster housing reconstruction, there is likely to be a shift toward more assistance for flood recovery and relatively less for earthquake reconstruction.

3.08 Various technical solutions for housing were employed by the projects, including sites and services, squatter upgrading, reconstruction loans, building materials vouchers and financing the imports of construction materials. Implementation arrangements varied considerably too, albeit most were set up within the public sector, with central government always playing some role, even if only that of coordination. Some

Fig 3.2 Regional Shares of Homelessness and of Bank Projects 1980-2000



projects used existing agencies, while others relied upon newly created agencies at either national or local levels, or both.²⁵

3.09 Across regions, Bank lending for emergency housing reconstruction is not closely related to the incidence of disaster homeless occurrence in each particular region. East Asia and the Pacific (EAP) and South Asia (SAR) together account for some 85% of all those made homeless by natural disasters, but only 23% of all Bank financed housing reconstruction projects (Figure 3.2). Bank response in LCR and ECA, on the other hand, is relatively strong when compared with the natural disasters occurring in those regions.

3.10 With a total of 15 operations, LCR hosts the largest number of Bank financed housing reconstruction projects in a single region. Along with EAP, ECA, and MNA, LCR is among the regions with the greatest 'project density' of housing, which is present in 36-40% of all reconstruction operations in those regions. This contrasts to Africa and South Asia, where only 20-22% of all reconstruction projects has housing components.

3.11 The quality of data reported about project outputs—notably the number of housing units financed, built or repaired—varies considerably across individual operations. This makes it difficult to analyze the group impact of the 37 projects on housing supply. Nevertheless, this study could estimate that, taken together, these operations were designed to assist in the reconstruction and repair of about 750,000 housing units worldwide. The biggest Bank clients for housing reconstruction were India and Iran, where 243,000 and 200,000 units, respectively, were either rebuilt or repaired. Although large absolute numbers in themselves, these figures fall far short of the total number of homes destroyed or damaged by the natural disaster events these projects were designed to address (details Chapter 1). In the cases of the thirteen projects that estimate these losses, nearly seven million homes were reported lost or damaged by natural disasters (for details by project, see Tables 3.1-3.6).

3.12 The remainder of this chapter briefly examines the housing reconstruction portfolio project-by-project across regions.

²⁵ Details of the technical solutions applied and the institutional arrangements adopted are discussed under each regional section throughout the remainder of this chapter.

AFRICA REGION

Table 3.1 Africa: Housing Reconstruction Projects since 1980

Project	Number of Units Provided	Housing Types	Implementation Arrangements	Outcomes/Other Issues
*Madagascar: Cyclone Rehabilitation (C1526) Loan: \$15.0m. FY85-89: 5.2 yrs Status: Sat	Unreported	US\$2.1m in loans	Through public sector banks: BTM and BFW	Terms: 10 yrs with 2 yr grace, 12% interest. (100,000 homes destroyed and damaged)
Mauritius: Urban Rehabilitation and Development (L1926) Loan: 15.0m. FY81-85: 4.4 yrs. Status: Sat	6,280 at \$2,400 per unit	130m ² site and service lots with 36m ² core units. Home reconstruction, repair and improvement.	Coordination: Ministry of Economic Planning. Implementation: Mauritius Housing Corporation Construction: private firms	70% above physical target (69% poor) Public consultation key. Lots allocated only in 1984 for a 1979 cyclone.
*Mozambique: Flood Emergency Recovery (C3336); Loan: \$30m FY00; Status: ongoing	Unreported	Not specified	Money to be used to purchase imported construction materials for housing.	(300,000 homes damaged)
*Sudan: Emergency Flood Reconstruction (C2011) Loan: \$75.0m. FY89-94: 4.5 yrs Status: Sat	Unreported	Provision of building materials (\$24.2m)	Implementation: Khartoum city govt. Construction: private firms	20% below physical target. City govt weak, unfamiliar with Bank. Private contractors' poor performance. (200,000 homes damaged)

Sources: DMF database, ICRs and PARs.

Notes: (apply to this and subsequent tables) * denotes ERL. **Number of units provided** – reports the number of dwelling units rebuilt and repaired by the project. Since housing type and completeness of provision varies considerably, the number of units may not always be comparable across projects. **Housing types** – describes the type of intervention, which could range from the provision of complete housing units, or simply building materials or vouchers to acquire them. **Implementation arrangements** – describe the main characteristics of those involved. **Outcomes/other issues** – describes particularly notable results or features of the project. (In the case of ongoing projects, data given are projections reported by appraisal documents.)

3.13 Highlights from the Africa portfolio include:

- Together with the South Asia Region, the Africa region has the lowest share of reconstruction projects with housing components across the Bank.
- Bank presence in housing reconstruction is thin. Two of the four projects are small operations in small countries. Between 1989 and 1999, no new projects were approved. Most Africa ERLs have focused on agriculture—notably drought recovery—with only limited attention given to urban housing.
- Even so, project documentation reports more than 600,000 houses destroyed or damaged through natural disasters, principally flooding.
- Few projects in Africa report precise physical targets of achievements pertaining to the housing delivered.
- Varied technical solutions applied through projects, including sites and services, home repairs, building materials provision, and home loans.
- Diverse implementation arrangements tried, including public sector banks, central government housing agency and local government. In all cases, private contractors were responsible for actual construction.
- Outcomes of all completed projects were satisfactory. There was no outstanding case of best practice, nor any of abject failure.

EAST ASIA AND PACIFIC REGION

Table 3.2 East Asia and Pacific: Housing Reconstruction Projects since 1980				
Project	Number of Units Provided	Housing Types	Implementation Arrangements	Outcomes/Other Issues
*China: North China Earthquake (C2091) Loan: \$30.0m. FY90-92: 2.9 yrs Status: Highly Sat.	52,200 rooms repaired. 34,500 rooms replaced.	Single family dwellings. Borrower—who prevailed—wanted higher standards than the Bank.	Coord/Impl: under a specially constituted unit. Resettlement was avoided.	Prep/Impl very speedy. New building materials used. Rebuilt units resisted second earthquake.
*China: Hebei Earthquake Rehabilitation (C3078) Loan: \$28.4m. FY98 Status: ongoing	20,000 units to be fixed. \$630 per unit.	Single family dwellings of traditional materials (mud-brick walls), with reinforced foundations.	Coord/Impl: special task force set up mostly at level of local authorities	Use of proven earthquake resistant building technologies (68,000 homes destroyed, 132,000 damaged)
*China: Yangtze Flood Emergency Rehabilitation (L4438 and C3169) Loan: \$69m FY99 Status: ongoing	Unreported (\$17.7m spent on resettlement)	Not reported	Central government itself implemented and paid the compensation.	(900,000 homes destroyed, 4,000,000 damaged)
*Indonesia: Flores Earthquake Reconstruction (L3589) Loan: \$42.1m FY93-99; 5.6 yrs Status: Sat	117 new units for medical staff (cost unreported).	Not reported	Through central government.	Exhibition homes of special bamboo construction were built (25,000 homes destroyed)
*Philippines: Earthquake Reconstruction (L3263) Loan: \$125.0m FY91-97: 6.2 yrs Status: Sat	8,365 units \$12.8m total cost.	S&S lots for Pinatubo eruption victims instead of reconstruction <i>in situ</i> of houses destroyed by earthquake. Provision of building materials.	Coord: Presidential Task Force for Rehabilitation Impl: National Housing Authority. Const: private contractors.	Introduction of earthquake resistant building designs. National building codes updated. Hazard mapping.
Sources: DMF database, ICRs and PARs. Note: (see Table 3.1)				

3.14 Highlights of the housing reconstruction experience in East Asia and the Pacific include:

- Bank experience is relatively recent, with projects approved only since 1990. Thus two cases out of three are those of China, itself a relatively new Bank borrower.
- Scale of reported housing losses in China is huge, although related projects in the region are modest in size.
- Region's portfolio includes one highly satisfactory housing reconstruction project (Credit 2091). OED and the Region attributed its success to: (i) strong local leadership; (ii) Bank attention to borrower views; (iii) overcoming cash flow bottlenecks during implementation; and (iv) "fast-track" processing by the Bank.
- Technical solutions in all projects focused on rebuilding single-family dwellings with emphasis on the use of proven earthquake-resistant designs and building materials.
- In all cases, special coordination and implementation arrangements were in force in order to speed execution. Special task forces had access to high level national authorities.
- Central government was the main player in all cases.
- All reconstruction operations with housing components were ERLs.

EUROPE AND CENTRAL ASIA REGION

Table 3.3 Europe and Central Asia: Housing Reconstruction Projects since 1980

Project	Number of Units Provided	Housing Types	Implementation Arrangements	Outcome/Other Issues
*Armenia: Earthquake Reconstruction (C2562) Loan: \$28.0m. FY94-97 3.4 yrs. Status: Sat.	2,857 units; \$5,600 per unit	Completion and retrofitting of unfinished apartment units -5 yrs after earthquake	Implementation by weak local governments.	Lack of demand for single-family units provided Armenian Fund provided competing housing free
*Poland: Emergency Flood Recovery (L4264) Loan: \$200.0m FY98 Status: ongoing	Unreported	Repairs to public sector communal housing (private housing not covered).	Coord/Impl: Ministry of Flood Recovery.	Project support for communal housing was justified as govt provided concessionary loans to private households.
*Turkey: Earthquake Rehabilitation and Reconstruction (L3511) Loan: \$285.0m FY93 Status: closing	940 recon; 1800 rehab; 900 repaired \$18,736 per unit (average)	Reconstruction, rehabilitation and minor repairs to cooperative apartments.	Coord: special steering committee of ministers. Impl: Housing Development Administration.	Funds could not be reallocated from existing sector projects as there were none. To date, large loan amounts have been cancelled (\$78.5 m. during 1997-99.)
*Turkey: Emergency Flood and Earthquake Recovery (L4388) Loan: \$369.0m FY99 Status: ongoing	Construction of 5,000 urban and 2,000 rural units. Repair of 54,602 urban units at \$9,000 each.	Mix of single family (mostly rural) and multi-family units (mostly urban). 80,000 homeless people were living in tents by project appraisal.	Coord: "crisis center" in Prime Minister's office. Impl: Housing Development Administration	Since 1959, govt responsible for natural disasters (Law 7269). (20,000 units destroyed and 62,300 damaged)
*Turkey: Marmara Earthquake Emergency Reconstruction (L4517) Loan: \$252.5m FY00 Status: ongoing	New 6,300 urban at \$20,000/unit and repairs to 54,602 units at \$9,000 each. 2,000 new rural units at \$8,500 each.	Priority to replace the most heavily damaged units. Lightly damaged buildings are excluded. Repairs only cover structural work and outside painting eligible for financing	Special PIU responsible for whole project. Rural: Beneficiaries will undertake construction under supervision of independent consultants	Planned TA on insurance to local authorities and establishment of Turkish Catastrophic Insurance Pool to encourage risk transfer away from govt. (66,441 homes destroyed and 147,402 damaged)

Sources: DMF database, ICRs and PARs.
Note: (see Table 3.1)

3.15 Among the key features of the Europe and Central Asia Region's experience:

- All housing reconstruction projects in ECA are recent, all having been approved by the Bank since 1993. In part, this reflects the fact that half the ECA borrowers themselves are relatively new Bank clients.
- Except for the small project in Armenia, none of the ECA housing reconstruction projects has been completed or had its performance evaluated by OED.
- The outcome of the Armenia project was rated satisfactory by OED.
- By far, Turkey is the biggest client in this region with Bank lending of more than US\$900 million (80% of region total). Assistance has focused exclusively on earthquake reconstruction
- Across all regions, Turkey is the Bank's single largest client for reconstruction assistance involving housing.
- Except for the smaller completed Armenia operation, ECA housing reconstruction projects have been large-scale and aimed at the recovery of a large number of housing units.
- Again except for the case of Armenia, overall coordination responsibility rested with specially constituted committees or agencies.
- All ECA reconstruction projects with housing components were ERLs.
- A variety of housing solutions employed, ranging from single-family units to multi-family apartment dwellings. Sites and services and squatter upgrading were not used in any of these cases.
- An innovative insurance component was included in one project in Turkey (Loan 4517).

LATIN AMERICA AND CARIBBEAN REGION

Table 3.4 Latin America and Caribbean: Housing Reconstruction Projects since 1980

Project	Number of Units Provided	Housing Types	Implementation Arrangements	Outcomes/Other Issues
*Argentina: Flood Rehabilitation (L3521) Loan: \$170.0m FY93 Status: ongoing	5,700 units. \$3,700 per unit for materials	30m ² core units of wood, built on stilts. Vouchers to acquire building materials and pre-fabricated sections.	Coordination: Ministry of Interior Crisis Committee. Implementation: Provincial govt. and self-help assembly by final beneficiaries.	Reconstruction in situ to avoid resettlement and invasion of vacated areas and to maintain community ties.
*Argentina: El Niño Emergency Flood (L4273) Loan: \$42.0m. FY98 Status: ongoing	300 units. \$6,200 per unit	44m ² self-help single family units.	(similar to above)	Some resettlement to higher land, but close by original location. (20,000 homes damaged)
*Brazil: Northeast Flood Reconstruction (L2645) Loan: \$100.0m FY86-89: 3.5 yrs. Status: Sat.	46,512 units. \$208 per unit.	Housing rehabilitation and reconstruction through provision of building materials	Coordination: SUDENE Implementation: State and municipal governments	To minimize costs only 4,000 families were resettled.
*Brazil: Rio Flood Reconstruction and Prevention (L2975) Loan: \$175.0m FY88-96: 7.3 yrs. Status: Sat.	9,233 lots \$8,000 per unit.	44m ² single family units. Major resettlement from risk areas and to allow drainage works.	Coord/Impl: Special RJ state unit (GEROE) and RJ municipal dept.	Bank had insisted on S&S, but borrower preferred 44m ² finished units that were eventually built.
*Colombia: Popayan Region Earthquake Reconstruction (L2379). Loan: \$40.0m. FY84-88: 4.4 yrs. Status: Sat.	4,000 lots	Site and service lots. Building materials loans.	Coordination: Specially convened Reconstruction Council.	
Ecuador: Nat'l. Low-Income Housing (L2135) Loan: \$35.7m. FY82-88: 6.5 yrs Status: Sat.	8,796 units at \$4,800/unit. 19,300 home imp loans at \$239/loan.	Single-family houses. Building materials for self-help construction. Upgrading existing settlements.	Implementation: Public sector housing bank (BEV).	Project scope expanded to cover 5,500 families affected by 1984 floods and 1987 earthquake.
*Ecuador: El Niño Emergency Recovery (L4259) Loan: \$60.0m. FY98 Status: closing	Not reported	Modular housing where needed for resettlement.	Civil defense, Army and local authorities for moving people. With Housing Ministry support, municipalities provide land and its preparation for settlement.	Resettlement of families away from areas of risk of floods and landslides ('applicable OD 4.30 requirements will be enforced').
*El Salvador: Earthquake Reconstruction (L2873) Loan: \$65m FY88-96: 8.8 yrs. Status: M.Unsat	5,277 houses built at \$5,520 per house.	Housing Lines of Credit.	Through government agencies and NGOs.	Phase I was halted due to problems with the implementing agency.
*Honduras: Hurricane Emergency Project (C3159) Loan: \$200m FY99: 1.0 yr. Status: Sat.	Unreported	Imported building materials for self-help reconstruction.	Primary responsibility lies with national government.	(33,220 houses destroyed and 49,500 damaged)
*Jamaica: Emergency Reconstruction Import Loan (L3012) Loan: \$30.0m. FY89-90: 1.0 yr Status: Sat.	3800 pre-fab units. 62,850 materials vouchers	Import of pre-fabricated units and materials. Studies of housing insurance. Vouchers for beneficiaries.	Coord/Impl: Ministry of Labor Welfare by (default), but no agency formally in charge.	Damage assessments inadequate. Use of imports for reconstruction not monitored. Imports of zinc sheets excessive.
Mexico: II Urban and Regional Development (L1990) Loan: \$164.0m FY81-83: 1.9 yrs. Status: Unsat.	5389 lots. \$3000/lot. 1131 loans, 2700 units upgraded.	Site and service lots. Building materials loans and upgrading. (\$81m. of loan to Mexico City earthquake)	Coordination: Absent at both national and state levels. Implementation: failed.	Only 20-39% of targeted families benefited. Failure due to trying to bypass SAHOP, ministry for urban development.
*Mexico: Earthquake Rehabilitation and Reconstruction (L2665) Loan: \$400.0m FY86-91: 4.8yrs. Status: Sat.	45,150 units in 2,870 condominiums.	Multi-family apartment units. Reconstruction in situ to minimize resettlement.	Coordination: Special Housing Reconstruction Agency of President's Office.	Major expropriation of privately held land. There was some cost recovery as victims paid off loans.
*Nicaragua: Hurricane Emergency Project (C3158) Loan: \$50m FY99: 0.5 yrs. Status: Sat.	Unreported	Imported building materials for self-help reconstruction.	Implementation of balance of payments funding through Ministry of Finance.	(32,000 houses destroyed and 112,600 damaged)
*OECS: Emergency Disaster (Hurricane Georges in Caribbean) (L4417) Loan: \$54.9m FY99. Status: Ongoing	Unreported		Money to be used to purchase imported construction materials for housing.	
*Peru: El Niño Emergency Assistance (L4250) Loan: \$150.0m FY98 Status: ongoing	12,123 units for resettlement. \$2,330/family	120 m ² lot per family, with 11m ² core unit.	Coord: Unclear Site specific resettlement plans will be developed.	Resettlement and evacuation of families at risk from landslides. (4,400 families made homeless)

Sources: DMF database, ICRs and PARs.

Note: (see Table 3.1)

3.16 Among the highlights of the Latin America and Caribbean Region's experience:

- The large number of reconstruction projects in the LCR region accounts for nearly half of the Bank total. Across regions during the 1980-2000 period under review, housing reconstruction has enjoyed priority attention from the Bank in Latin America and the Caribbean.
- The Bank has approved housing reconstruction projects throughout the 1980-98 period under review, but Bank support has not been even throughout. For a long period during (fiscal years) 1990-1997, the Bank approved only one housing reconstruction project. Only recently, during 1998-99, did Bank support for housing reconstruction resume, especially through the "El Nino" projects.
- A package of sites and services and building materials loans has been the most common technical solution for housing reconstruction on offer. There have been other distinct approaches too. They include emergency financing of imports (Jamaica) and major re-assignment of tenancy in favor of victims (Mexico City).
- For the most part, housing reconstruction projects in LCR have been on a large scale, aiming to benefit large numbers of low-income families.
- Major exercises of resettlement—two before 1990, while Bank resettlement policy still applied to ERLs—were successfully carried out in three countries.
- Coordination has generally been in the hands of powerful special agencies/committees with access to top ranking authorities.

MIDDLE EAST AND NORTH AFRICA REGION

Project	Number of Units Provided	Housing Types	Implementation Arrangements	Outcomes/Other Issues
*Algeria: Mascara Emergency Reconstruction (L3813) Loan: \$51.0m FY95-99 Status: Sat.	2,266 new units; 592 damaged units repaired.	Permanent single-family units. Steel structures for temporary shelter.	Special PIU at wilaya level to oversee implementation, but did not always have authority over sectoral agencies	By completion, 61% of project costs were accounted for by housing reconstruction.
*Algeria: Ain Temouchent Emergency Earthquake Recovery (L7023) Loan: \$83.5m FY00 Status: ongoing	3,400 new units at \$13,750 each. Construction materials for 800 units.	New social rental housing to replace units destroyed and others dangerously located. Self-help with TA for individual reconstruction.	Special Project Coordination Unit of regional govt to oversee implementation. Construction supervision by independent consultants	Housing component will account for 58% of total project costs (2,708 houses destroyed and 4,026 damaged)
*Iran: Earthquake Recovery (L3301) Loan: \$250.0m FY91-96: 5.3 yrs. Status: Sat	200,000 units reconstructed in 28 months.	Single-family units Resettlement issue was avoided. Govt itself wanted to avoid mass migration	Coordination: Central government. Bank loan financed just 6% of a very large-scale US\$4,100m. government reconstruction program.	Earthquake proof steel/cement instead of traditional materials (wood) "Wind bracing" to retrofit buildings. (no. of houses destroyed: 120,000 per MOP, 200,000 per ICR)
*Yemen: Emergency Flood Reconstruction (C2073) Loan: \$10.0m FY90-95: 5.1 yrs Status: Highly Sat	300 units, \$19,300/unit.	Single family dwellings.	Coord/Impl: Government's special Emergency Reconstruction Unit.	Success in very difficult country conditions: Yemen/S.Yemen union, Gulf War and Civil War
Sources: DMF database, ICRs and PARs. Note: * (see Table 3.1)				

3.17 Highlights from the region's experience include.

- Only very limited Bank involvement in housing reconstruction through three projects approved in the early 1990s.
- The MNA sample includes one of the portfolio's three *highly satisfactory* operations (Yemen).

- The technical housing solutions applied to both projects was for single-family housing. Both projects introduced disaster-resistant building technologies and materials.
- In both cases, exceptional coordination and implementation arrangements were put in place through special government disaster-related agencies.
- The project in Iran is outstanding for two reasons. Firstly, it is one of the largest efforts in post-disaster housing reconstruction ever supported by the Bank in any region. Secondly, it was one of the most successful.

SOUTH ASIA REGION

Table 3.6 South Asia: Reconstruction Projects with Housing Components since 1980

Project	Number of Units Provided	Housing Types	Implementation Arrangements	Outcomes/Other Issues
Bangladesh: Coastal Embankment Rehabilitation and Reconstruction (C2783) Loan: \$53.0m. FY96 Status: ongoing	2,000 units plus \$199 per unit resettlement costs.	200m ² homestead plot with building material grant. Large-scale resettlement.	Coordination: Consultants hired by government. Resettlement plan as per OP 4.30 prepared	Resettlement plan hampered by understated property values (for tax reasons) and the lack of a grievance process (500,000 homes destroyed)
*India: Maharashtra Emergency Earthquake Rehabilitation (C2594) Loan: \$246.0m FY94-99 4.8yrs Status: Highly Sat	23,000 new units and 210,000 repaired. \$1,730 max per unit.	25m ² single-family units. Repair and reconstruction in situ. Retrofitting of existing structures. Model houses built for demonstration purposes.	Coordination: State govt. Implementation: Special project management unit, with NGO and community participation. Const: Private contractors and self-help.	Use of earthquake resistant materials and designs, and training of local masons, carpenters and artisans. (230,000 houses damaged)
*India: Andhra Pradesh Cyclone Emergency (C2173/L3260) Loan: \$210m FY91-95 3.5yrs Status: Sat	Unreported (\$18.4m. spent on housing)	Repairs to existing housing.	The borrower paid all housing costs. World Bank documents do not report on them.	(1,600,000 low-cost houses damaged)
Nepal: Municipal Development and Earthquake Emergency Housing Reconstruction (C1988) Loan: \$41.5m FY89-96 7.3 yrs Status: Unsat.	53,000 loans and grants for reconstruction and repair. \$538 per unit.	Not reported.	Coordination: originally by Nagar panchayats but these were dissolved. Implementation: Commercial banks.	Govt converted smaller loans into grants. Poor repayment of larger loans. No. of actual beneficiaries 18.5% below target.
Sources: DMF database, ICRs and PARs				
Note: * (see Table 3.1)				

3.18 Among the highlights from South Asia experience with Bank financed housing reconstruction:

- Very large housing losses due to specific disaster events, with 2,100,000 units destroyed in two projects in India and Bangladesh alone. Housing reconstruction through respective projects does not appear to match the scale of the destruction wrought.
- Heterogeneous project design and uneven project performance across countries.
- In all cases, projects succeeded in maintaining unit costs of housing solutions at very low levels.
- Diverse solutions adopted for implementation, including one case of assignment of coordination responsibilities to hired consultants.
- Successful introduction of earthquake-resistant technologies and training of local artisans in India.
- Performance has varied across a portfolio that includes a project with a highly satisfactory rating at one end and unsatisfactory at the other.