

Natural Disaster Response

Lessons from Evaluations of the World Bank and Others

EVALUATION BRIEF

16

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Abbreviations

ERL	Emergency recovery loan
GRM	Grievance Redressal Mechanism
ICR	Implementation Completion and Results Report
IDA	International Development Association
IDB	Inter American Development Bank
IEG	Independent Evaluation Group
IFC	International Finance Corporation
NGO	Nongovernment organization
M&E	Monitoring and evaluation

Summary

This document aims to provide a concise collection of those good practices and challenges that have recently been identified by evaluative work on natural disaster response of the World Bank, the Independent Evaluation Group (IEG), and other major actors. It is hoped that the lessons identified can be used by World Bank staff engaged in work related to natural disasters, to gain insights into approaches that may promote or hinder effective assistance to partner countries.

Although great international attention is focused on the occurrence of disasters and the short-term response to them, this phase is only part of the overall disaster management cycle. This cycle includes three main phases—pre-disaster, disaster response, and post-disaster—each of which has an appropriate range of activities. These phases do not have clear boundaries, but overlap chronologically, as well as in terms of the ongoing activities. In placing the lessons concerning natural disaster response projects within the broader context of the disaster management cycle, it becomes clear that responses can be simpler and more effective if activities of the pre-disaster phase have already been appropriately conducted. Nevertheless, because this is often not the case, the lessons presented take account of the possibility that existing institutions dealing with disasters may not be strong.

Lessons for the Pre-Disaster Phase

Many lessons for the pre-disaster phase of the disaster management cycle actually appear in evaluations of disaster response activities. This is because pre-disaster activities have largely been catalyzed by such situations. Two basic lessons are apparent for this phase:

- Capacity development in disaster management before a disaster strikes can reduce the burden on disaster response support, make it more effective, and increase national ownership of the response process.
- A balanced approach to disaster management should relate it to broader national approaches to sustainable development and poverty reduction.

Lessons for the Disaster Response Phase

Evaluations have provided many lessons for this phase. However, these generally also carry over into the post-disaster phase, and even further into the next pre-disaster phase. Some of the lessons may partially contradict each other (for example, the value of local participation may cut across the benefits of speedy action), which means that trade-offs must be developed for each specific situation. Main emerging findings are presented below:

- Keep project design as simple and realistic as possible within what is likely to be a complex implementation environment.
- Base project deadlines on a specific analysis of capacity in the situation of post-disaster disruption, rather than on the “normal” situation.
- Streamline procedures as far as possible to meet the need for quick delivery.
- Although essential, the rapid development and processing of disaster-related interventions present ownership challenges.
- Natural disaster responses need to include a broad range of stakeholders, especially the poorest and most vulnerable, as well as the private sector.
- Disaster response situations often present the best opportunities to develop disaster

preparedness (pre-disaster) activities, because of the temporarily high profile of disasters.

- Building such disaster preparedness elements during the response stage may require a longer period of implementation, initially focusing on rehabilitation and later on mitigation.
- Information, communication, and data management systems, which are vital in any disaster-related situation, have often proved weak.
- Agencies financing natural disaster response projects have reported significant challenges in designing an instrument that provides resources quickly enough or for long enough to achieve their objectives.

Lessons for the Post-Disaster Phase

Evaluations of post-disaster phase activities have similarly generated lessons, many of which anticipate the next round of pre-disaster activities, as the cycle re-commences:

- Post-disaster recovery requires strong institutions, which can be achieved either through developing the capacity of existing bodies or by creating new ones. The latter usually need specific mandates and time boundaries to be effective.
- Community-driven approaches to recovery and reconstruction can help build local capacities for future project identification, planning, implementation, and ex post operation and maintenance.
- Housing reconstruction programs that give maximum responsibility to homeowners have been found more effective than contractor-led systems. However, these programs need specific measures to ensure that vulnerable people can participate.
- Although speed is important in designing and implementing reconstruction programs, this should not be at the expense of accountability and transparency.
- Reconstruction programs should ensure that effective grievance and complaint mechanisms are in place for those who may feel excluded.
- Flexibility (especially for procurement procedures) and the ability to revise project targets

and activities are vital in post-disaster situations, particularly when major infrastructure activities are implemented by multiple stakeholders.

- Because disaster-related projects face unusual implementation barriers associated with weakened institutions that are expending substantial funds quickly, strong monitoring and evaluation systems are even more important than normal.

The Specifics of Slow-Onset Disasters

Slow-onset disasters, such as droughts, are often long-lasting and recurring situations. To deal with this difficult combination, there is a strong need for collaboration and coordination between stakeholders involved in both humanitarian and developmental activities. However, this collaborative relationship has often proved difficult, and cooperation between the two kinds of institutions is widely reported to be ineffective.

Applying the Lessons

Since the publication of IEG's 2006 evaluation *Hazards of Nature*, lessons have continued to emerge concerning natural disaster response activities. These lessons have been organized here according to the phase of the disaster management cycle in which they first occur.

One overriding lesson concerns the advantages of reducing risks and increasing preparedness within the national development strategies of countries that are prone to disasters. Measures taken to reach these objectives are believed to deliver substantial gains in the effectiveness of the response when disasters occur. However, formal evaluations of the impacts delivered by risk reduction and preparedness so far are largely absent.

It is also clear that every natural disaster has unique characteristics, so that the lessons presented here need to be carefully assessed for their applicability in each case. They provide a set of guidelines that can be examined for their relevance to specific situations, with the

objective of making interventions more effective and efficient for affected countries, as well as for donors' assistance programs.

Some of the lessons derived from project and program experience in the area of natural disaster response would apply to projects in any field, but are even more important in the case of disaster projects, because of the social, economic, institutional, and governmental disruption in which they operate.

There is also a distinctive set of lessons concerning the processes through which disaster response can be prepared and planned for in advance. These highlight the importance, within the overall disaster management cycle, of disaster risk reduction and the need to raise its profile in both affected countries and international organizations. Risk reduction should have a central role in any disaster-prone country's overall sustainable development strategy and should therefore form an integral part of the donors' programs and country strategies.

1. Introduction

This brief aims to provide a concise collection of those good practices and challenges that have recently been identified by evaluative work on natural disaster responses of the World Bank, the Independent Evaluation Group (IEG), and other major actors. It is hoped that the lessons identified can be used by World Bank staff engaged in work related to natural disaster management to gain insights into approaches that may promote or hinder effective assistance to partner countries.

Its main data sources include Implementation Completion and Results Reports (ICRs); self-evaluations by the World Bank of projects that closed since 2006; IEG's independent field-based evaluations of a subset of these projects (Project Performance Assessment Reports); IEG evaluative notes on specific natural disasters in Haiti, Pakistan, and West Africa; World Bank publications covering natural disasters (mostly published since 2006); and reviews and evaluations of natural disaster activities by a variety of international and national bodies active in the field.

This report first presents an overview of the key phases of the disaster management cycle, which have been identified by academics and practitioners in the field. This is important to show the interrelationship between the different phases associated with disasters and the types of assistance that are most effective in preparing for and responding to such events. It then outlines the different types of lessons that have been found to apply to each phase before drawing some brief conclusions.

2. The Phases of the Disaster Management Cycle

Although great international attention is focused on the occurrence of disaster events and the short-term response to them, this phase is only a part of the overall disaster management cycle. As shown in Figure 1, the cycle includes three main phases; for each phase, a range of activities is appropriate.¹

These phases do not have clear boundaries, but overlap chronologically, as well as in terms of the ongoing activities. In placing the lessons concerning natural disaster response projects within the broader context of the disaster management cycle, it becomes clear that responses can be simpler and more effective if activities of the pre-disaster phase have already been appropriately conducted. Nevertheless, because this is often not the case, the lessons presented here take into account the possibility that existing institutions dealing with disasters may not be strong at the time the disasters occur.

Phase 1: Pre-Disaster

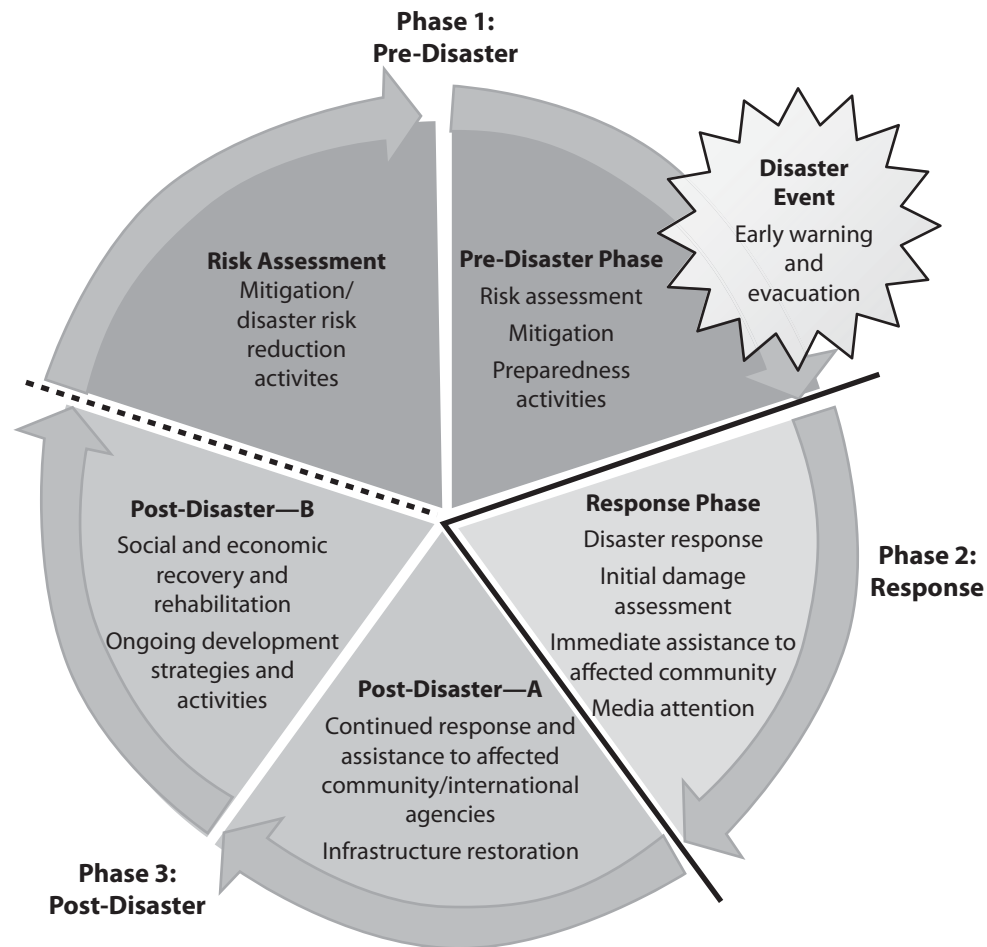
The pre-disaster phase is, in many ways, the most important. With rare exceptions, the occurrence of disasters is in principle predictable, although not their precise location, timing, or severity. For this reason, a variety of measures should be taken in advance, notably in the areas of risk assessment, mitigation/prevention, disaster preparedness, and risk reduction.² There is a close link between disaster risk reduction and preparedness. Risk reduction activities within the pre-disaster phase often focus particularly at the community level. They fall within the conceptual framework of elements considered likely to minimize vulnerabilities and disaster

risks throughout a society to avoid (prevent) or limit (mitigate and prepare for) the adverse impacts of hazards, within the broad context of sustainable development.

The disaster risk reduction framework encompasses the following fields of action (UN ISDR 2002, p. 23):

- Risk awareness and assessment, including hazard analysis and vulnerability/capacity analysis
- Knowledge development, including education, training, research, and information
- Public commitment and institutional frameworks, including organizational, policy, legislation, and community action
- Application of measures, including environmental management, land-use and urban planning, protection of critical facilities, application of science and technology, partnership and networking, and financial instruments
- Early warning systems, including forecasting, dissemination of warnings, preparedness measures, and reaction capacities.

Mitigation can include structural and nonstructural measures undertaken to limit the adverse impact of natural hazards, environmental degradation, and technological hazards. Preparedness helps the community cope better

Figure 1: Phases of the Disaster Management Cycle

Source: Based on work of Ian Davis, Cranfield University, Bedford, United Kingdom.

should another disaster develop. It includes activities and measures taken in advance to ensure effective response to the impact of hazards. It may include leadership training and strengthening community participation; plans for the issuance of timely and effective early warnings; and measures for the temporary evacuation of people and property from threatened locations, such as communities living near a possible source of flooding.

Phase 2: Response

The response phase begins immediately after a disaster strikes and encompasses both immediate response (relief) and medium-term response, the

latter of which attempts to begin to re-establish functionality of systems and infrastructure.

- Once a disaster has taken place, the first concern is effective relief—helping those affected to recover from the immediate effects of the disaster. Such relief work includes providing food, clothing, shelter, and medical care to victims. For rapid onset disasters, such as earthquakes, this phase may last for weeks or a few months. For slow onset disasters, such as droughts, it may last months or even years.
- Medium-term response takes the first steps toward recovery by assessing damage to infrastructure, communities, institutions, industry, and business and by planning measures

necessary to restore these to previous levels or better.

There is an overlap between the response and the post-disaster phases, and projects or programs may span both.

Phase 3: Post-Disaster

The post-disaster phase includes activities in the fields of recovery, rehabilitation, and reconstruction. It also affords an opportunity to develop disaster risk reduction measures, which can be applied during the next pre-disaster phase (that is, Phase 1). This phase includes the following:

- Decisions and actions taken after a disaster with a view to restoring or improving the pre-disaster living conditions of the stricken community, while encouraging and facilitating necessary adjustments to reduce disaster risk.

- Restoring the basic services needed to enable life to move back toward “normalcy.”
- External support, such as loans to governments, technical assistance, resources for farmers, and help for businesses to restart.
- Rebuilding homes and industry, which is linked to restoration of social and economic development. It is important at this stage to design stronger buildings that are able to withstand future disasters.
- Activities focused on enabling communities to protect themselves. Such measures need to be particularly available to those at greatest risk—the poorest and most vulnerable in the community.

Notes

1. The authors prefer to call this the disaster management cycle, because it includes the response as well as risk management.
2. These measures have been embodied in the Hyogo Framework for Action 2005–2015 (UN ISDR 2005).

3. Lessons for the Pre-Disaster Phase (Phase 1)

The pre-disaster phase is, in many ways, the most important. This is because disasters tend to be concentrated in certain regions or countries, although their precise location, timing, or severity is not predictable. For this reason, a variety of measures should be taken in advance, notably in the areas of risk assessment, mitigation/prevention, disaster preparedness, and risk reduction.¹

Capacity building and training in all aspects of disaster management before a disaster strikes (Phase 1) can reduce the burden on disaster response support (Phase 2), make it more effective, and increase national ownership of the response process.

An important role for international partners is to help strengthen the capacity of in-country institutions (including civil society actors) mandated to lead disaster preparedness and response, particularly at the local and community level, where first responses are made.

Because national governments have the ultimate responsibility for leading responses to natural disasters, building national and local capacity is critical to promoting future effectiveness in this area. A multi-stakeholder review of responses to the Asian tsunami confirmed the importance of raising local capacity and engagement in the entire disaster management cycle and provided specific lessons (Box 1).

A number of Bank project self-evaluations (ICRs) have commented on difficulties experienced in adopting such a proactive approach to reduce

Box 1: Specific Lessons from Responses to the Asian Tsunami

- Disaster preparedness has been mainly focused on planning for emergency response, with a focus on tsunami-like disasters. So far, little attention or investment has gone into early warning, preventive, and mitigation measures or to recurring disasters such as floods and droughts.
- Effective disaster risk reduction interventions have the potential to strengthen grassroots institutions at the local and district levels, as well as to strengthen the interface between grassroots community organizations and local authorities. Thus the interventions can make local governance more inclusive and participatory.
- Although village-level hazard maps and preparedness plans have been developed, unless these lead to practical action aimed at mitigation measures, people will lose interest in keeping them updated. Already in Sri Lanka, communities have complained that they have identified local hazards that accentuate flooding, but the government and nongovernmental organizations have not made enough resources available for the communities to take corrective actions.
- Interventions that are based on strong partnership and links with local organizations, including in the private sector (banks/financial and insurance companies), are far more likely to succeed than one-off asset distributions.

Source: DEC 2010.

the effects of future disasters, even though there is widespread agreement that this is essential. For example, in the case of the Mexico Disaster Risk Management Project (World Bank 2005b), even though the country had been repeatedly affected by disasters and mitigation measures could have offered major benefits, such measures had not been incorporated into the country's planning for sustainable development. To help strengthen national-level support for a proactive approach to disaster preparedness, the self-evaluation suggests increased attention to raising the capacity both of the development agency staff and of borrowers.

Although there have been such cases of weak approaches, the Bank has elsewhere implemented varied and innovative capacity building and training activities. Even though they are conceptually part of the pre-disaster phase, these have often been introduced as part of disaster response packages (that is, in Phase 2) or as part of reconstruction programs (Phase 3). The sustainability of gains made through this type of activity can best be assured by feeding them into future Phase 1 programs.

The Uruguay Foot and Mouth Disease Emergency Recovery Project (World Bank 2010d) provided strong and continuous education and training for public and private veterinary services, as well as for farmers and the general public to update the evolving sanitary threats. In the Ethiopia Productive Safety Nets Project (IEG 2011b), it was discovered that the delivery of training programs for existing staff should take into consideration the typically high turnover of rural civil servants. The Iran Bam Earthquake Emergency Reconstruction Project (World Bank 2010a) called for specific additional capacity building. It discovered the particular importance of the Bank rapidly understanding and serving the client's needs when there has been little previous interaction by preparing in advance a capacity-building program on the Bank's processes and procedures.

The Sri Lanka Tsunami Emergency Recovery Program provided technical assistance and training for artisans and homeowners in safe construc-

tion techniques. Again, although these measures were designed as part of a disaster response and recovery program (Phase 2), they actually promoted better standards of housing that would be more resistant to any future disaster events, conceptually part of the pre-disaster phase. The Sri Lanka training not only built the capacity of homeowners and artisans to a level that enabled the predominantly homeowner-driven housing reconstruction program to achieve its targets, but it also raised the capacity of the local construction industry through ensuring additional skilled labor. The project also developed operational manuals, which the government officially adopted. These clarified the roles and responsibilities of the multiple players and partners involved in the program and facilitated smooth implementation. Some of the good practices in the preparation of the Operational Manuals are shown in Box 2.

A balanced approach to disaster management is needed that can relate this area of activity to both sustainable development and poverty reduction. Evaluations by the World Bank and the Inter-American Development Bank (IDB) support the importance of including such an approach in the formal support strategy for the country.

The distribution of natural disasters is broadly predictable, with many countries facing recurring events. In such countries, it is important to clarify how linkages will be made among prevention, preparedness, response, and recovery, so that the assistance provided will bring benefits in the future, as well as respond to current needs. If attention is not paid to supporting overall natural disaster management processes within a sustainable development framework, it is likely that funds will be repeatedly required to address the same recovery needs. This calls for an enhanced emphasis within operations in such countries on pre-disaster activities (Phase 1) to help reduce the need for repetitive disaster response (Phase 2) activities.

The Algeria Natural Hazard Vulnerability Reduction Project encountered such a situation,

Box 2: Good Practices in the Preparation of Operational Manuals in Sri Lanka's Post-Disaster Situation

- Planning for participatory and inclusive preparation of the manuals, in the light of international practices, tailored to local needs.
- Clear advance clarification of the roles and responsibilities of multiple players and partners, including government institutions, civil society, and beneficiaries. Although an operational manual is finalized over a period of time, a set of immediate operating instructions can help in the early stages of program implementation.
- A binding implementation framework that mandates official adoption of the manual and monitoring mechanisms/periodic audits for ensuring compliance.
- The manual remains “alive”—in terms of being responsive to emerging requirements and localized solutions—within the confines of the program policy framework.

Source: World Bank 2009g.

in which inadequate risk reduction and mitigation measures made disaster response a much larger task than necessary (World Bank 2007a). The ICR reports that the impact of the torrential rains of November 2001 on Algeria's urban areas would have been much less dramatic had the government taken measures to reduce the risks of flooding and implemented its existing regulations concerning urban development. With Bank support, the government had already implemented appropriate risk reduction measures in the greater Algiers metropolitan area.

However, these measures were also needed in other urban areas, for which development plans should have included appropriate measures for preventing severe damage from natural disasters, including earthquakes and floods. Furthermore, annual budgets of agencies in charge of risk prevention and management should have included adequate and well-identified amounts for natural disaster prevention. The government could have built on the achievements of Bank-supported projects to raise the awareness of local authorities and technicians regarding the benefits of preventive measures and to encourage their inclusion in local development plans and activities.

The failure to support a balanced approach to disaster management has also been flagged as an important issue in an evaluation conducted by the IDB (IDB 2004). The evaluation found the following:

- An imbalance of instruments across the disaster risk cycle. Even though prevention is

strongly emphasized in several documents, emergency and post-disaster activities still receive much broader attention.

- A mismatch between IDB programs and activities and actual country priorities, incentive structures, and implementation capacities. As a result, countries are not able to put into practice the new approaches developed with assistance from support programs.
- An imbalance of countries' priorities concentrating on sustainable development and on poverty reduction and neglecting disaster prevention, even in severely prone regions.

The IDB evaluation concludes that the culture of rehabilitation and reconstruction that has prevailed in the countries affected by natural disasters—as well as in the institutions that finance those activities and in bilateral aid—should shift to facilitate preparation and execution of prevention and mitigation programs.

IEG's note on the response to the Pakistan floods (IEG 2010b) also points out, for example, that some flood programs have focused too heavily on rebuilding infrastructure and not enough on better adaptation and preparedness for the future through complementary investments, such as flood management, cropping pattern adjustments, rural finance, enhancing capacities of water users groups, and early warning systems. There are trade-offs between the need for urgency, which might be met by simply replacing what was lost, and the desire to “build back better,” which may take longer but has

greater disaster risk reduction, mitigation, and long-term development results.

Several projects and programs have taken the opportunity to improve on prior physical as well as organization structures, systems, and processes. The IEG note indicates, for example, that in Pakistan, World Bank flood response projects have also focused on reducing vulnerability and building farm resilience to reduce the effects of subsequent flooding, an approach that has increasingly appeared in national strategies. Similarly, a current International Development Association (IDA) Mali Agricultural Productivity Project (World Bank 2010b) has a subcomponent to modernize farming systems and supply chains that is designed to contribute to reduction

of damage from future flooding. One of its aims is to improve ecosystem resilience through better rangeland management and increased carbon sequestration² (above and below ground) using a range of technologies that enrich soils with organic carbon and improve biomass production and vegetation cover.

Notes

1. These measures have been embodied in the Hyogo Framework for Action 2005–2015 (UN ISDR 2005).
2. Carbon sequestration describes long-term storage of carbon dioxide or other forms of carbon to either mitigate or defer global warming. It has been proposed as a way to slow the atmospheric and marine accumulation of greenhouse gases, which are released by burning fossil fuels.

4. Lessons for the Disaster Response Phase (Phase 2)

The response phase begins immediately after a disaster strikes and encompasses both immediate response (relief) and medium-term response, which attempts to begin to re-establish functionality of systems and infrastructure. The World Bank is not normally a major stakeholder in relief activities, which are mainly mandated to be implemented by the United Nations and specialist nongovernmental organizations (NGOs), such as the International Federation of Red Cross and Crescent Societies.

Medium-term response takes the first steps toward recovery by assessing damage to infrastructure, communities, institutions, industry, and business. This phase also covers planning measures necessary to restore these areas to previous or better levels. Chronologically these medium-term response activities often overlap with those of the immediate response (relief) period. This overlap has posed serious problems because of the different mandates and emphases of the two sets of activities and of the national and international institutions that are primarily responsible for them.

In principle, national ownership of all disaster response activities is a goal to which all stakeholders subscribe. In practice, however, governments weakened by disaster events may be overwhelmed by the large scale of external interventions, leading to a great reduction in the extent to which they can actually control and coordinate them.

Many World Bank activities are conceived, prepared, and planned during the disaster response phase. They are therefore covered in this section of the report, in terms of their characteristics and lessons. However, they may be largely implemented during the post-disaster phase (Phase 3).

A number of important characteristics have been evaluated as contributing to effective natural disaster response support. These encompass speed, inclusion, ownership, transparency, accountability, and flexibility. However, it is also clear that these characteristics may to some extent challenge each other so that, for example, the need for inclusion and ownership may make it far more difficult to carry out activities with speed. In the context of specific field situations, the ability to prioritize and establish trade-offs between the various desirable program characteristics therefore becomes essential. This issue provides an important caveat to the following lesson, which has emerged from several evaluative sources.

The design of natural disaster response activities should be as simple and realistic as possible.

This lesson needs to be placed within the context of other lessons here, even if it may not immediately appear to be compatible with them. We can therefore reframe the lesson to indicate that project design should be as simple as possible, without reducing the importance of achieving the full participation of local communities and other intended beneficiaries (summarized from IEG 2010c) or of taking into account local

implementation capacity. Because capacity to use aid effectively is often limited if institutions are weak and governance is poor, the focus from the beginning also needs to be on the development of capacity and improvement of governance, not merely the reconstruction of physical infrastructure. One aspect of simplicity is that disaster response projects should limit the number of implementing agencies and sectors involved. It is also appropriate to minimize the conditions placed on the lending. Implementation should be flexible to ensure responsiveness to community needs and rapidly changing conditions on the ground (IEG 2005). Overall, natural disaster response projects should seek to achieve complex objectives using the simplest design that can deliver their objectives.

Although many projects have effective design approaches, many still have had unrealistic objectives. Across some 60 disaster activities reviewed in the IEG *Hazards of Nature* evaluation (2006), most required extensions of about a year and a half on three- to six-year projects, and many of the extended projects still did not achieve their original targets. Many conventional (nondisaster) projects have similar overruns; such “delays” may represent a realistic approach to incorporating longer-term activities into emergency recovery loan (ERL) activities, which were formerly restricted to three years for implementation. It is essential that project design take into account the fact that the borrower on all levels—local and national government, as well as communities—will have a diminished capacity to function following a disaster. This realization should be coupled with a clear analysis of the borrower’s institutional capabilities on all levels. Such an analysis should be part of the design phase and feeds into the next lesson.

Project and program deadlines should be based on a specific assessment of national and local capacity in the post-disaster situation, not on “normal” circumstances.

In emergency situations, when a government’s capacity is adversely affected by the disaster, it is even more important not to set overambitious

targets and deadlines. For example, the Sri Lanka Tsunami Emergency Recovery Program was rapidly processed under the Bank’s emergency guidelines. Although its targets were largely achieved, the government machinery was stretched to the limit, and time extensions were requested but not approved. Although there appear to be various reasons for project time overruns, it is clear that an accurate assessment of the effects of the disaster on the capacities of government and implementing agencies is an important foundation on which to build. Project targets and implementation periods may then be planned and designed on the basis of such knowledge, rather than on “normal” capacities.

Alternative networks, such as NGOs and United Nations agencies, can fill gaps, but their participation should be coupled with a plan to increase government administrative capacity (IEG 2010a). Design should limit the number of implementing agencies and the number of sectors involved, as well as reduce the conditions placed on the lending.

Response projects (or response elements of larger multiphase projects) need to be developed and implemented rapidly, using streamlined procedures wherever possible.

The importance of speed for disaster response activities has been emphasized in a note for the Haiti earthquake (IEG 2010c), which highlights the value of the following disaster relief elements:

- Streamlined decision making and procedures for contracting civil works to help avoid delays.
- Leveraging existing private sector capacity as critical for effective emergency response.
- Working with International Finance Corporation (IFC) clients near affected areas to gain speed and effectiveness. In such situations, matching grant schemes can be powerful instruments for emergency response, but their effectiveness can be limited by the nature of IFC’s pre-existing activities.

- Balancing speed with careful assessment of demand and relevance in rapidly changing post-disaster conditions.

The importance of rapid action in promoting longer-term mitigation and risk reduction measures (which can merge into a future Phase 1 program) has also been demonstrated. An IEG lessons review (IEG 2005) emphasizes the importance of reaching agreement with the government on mitigation measures within the first three months, because it gets much harder to get politicians to focus on disaster once the memory of the emergency recedes. Once these agreements are reached, they need to be locked into some form of public commitment, including on financing mechanisms, to which people can refer to keep the government on track.

However, speed in and of itself is not enough. One of the immediate post-disaster challenges is to respond to urgent reconstruction needs, but in ways that improve on past practices and reduce the chance of a recurrence of problems in the future. Although initial quick action is important, experience suggests that in an emergency situation, such as that which prevailed after major floods in Pakistan, subproject readiness should not divert the investment focus from a well-planned priority list (IEG 2010b). Therefore, if the highest priority programs are not ready to implement, it is better not to launch lower-priority activities simply because they are ready. Similarly, although damage assessments are quick, detailed, and focused, they are not one-off efforts. They should be updated as the situation develops. Quick initial action and a realistic schedule are often major success factors in responses to natural disasters. The actions of the first few days affect all future decisions.

Emergency projects require special attention to disbursement arrangements (IEG 2010a). Bottlenecks to cash flow should be minimized before project approval through provision of guidelines, sample bidding documents, technical assistance to first-time borrowers, training in procurement procedures, and simple local

disbursement regulations. IEG's natural disaster evaluation (IEG 2006) found that budget support operations were not any quicker than ERLs for transferring resources.

Although essential to effective implementation, the rapid development and processing of disaster-related interventions present ownership challenges. This is particularly so in situations where several donors and partners are attempting to activate their assistance at the earliest opportunity, such as in the international responses to the Haiti earthquake and the Asian tsunami.

The responses to many disasters have raised major concerns about the extent to which local institutions and communities were bypassed in planning and implementing activities. As a recent major example, the international response to the Haiti earthquake raised many questions concerning the effectiveness of the assistance offered by the international community. For example, a structured synthesis evaluation (University of Haiti and Tulane University's Disaster Resilience Leadership Academy 2011) reports that, although short-term economic activities have been introduced and are ongoing, there has been little reflection as to whether the protracted emergency response has supported or has actually undermined resilience in Haitian communities. Twelve months after the devastating January 2010 earthquake, more than 1 million Haitians remained in camps, and substantive recovery had not yet begun.

Many of the evaluations reviewed in this analysis identify the lack of Haitian participation in decision-making processes as a major concern and obstacle to building individual, household, community, and national resilience. Moreover, resources and activities still focused on humanitarian maintenance work, and the notion of "building back better," had not yet penetrated relief and recovery efforts. A key finding is the need for more engagement of Haitian local leaders, civil society, and—more importantly—those directly affected in future project development to promote resilient recovery.¹

Similar issues were faced in connection with the Asian tsunami response. An international evaluation (Bennett and others 2006) finds that a consequence of the “swamping” of local capacity by the large international presence in Aceh (Indonesia) and Sri Lanka was poor representation of local NGOs and community-based organizations, and little consultation with them in coordination meetings. This may have led to the erosion of local emergency capacities. An IEG review of recent Bank experience (IEG 2010a) notes that rebuilding social structures is a large challenge and one that is rarely done well. The characteristics of initial disaster response make this even more difficult if the response ignores local institutions and creates dependence. Even in community development interventions, where participatory approaches are inherent, implementation can still break down, especially when there are pressures to rebuild structures rapidly.

Ideally, the engagement of local stakeholders can be assured through their participation in long-term disaster management activities. An evaluation for the European Commission (Aguaconsult Ltd. 2009) presents some key aspects of an approach founded on local ownership, as shown in Box 3.

Natural disaster response projects need to include a broad range of national and local stakeholders, particularly the poorest and the most vulnerable, as well as the private sector.

The importance of encouraging national ownership should be coupled with attention to the concept of inclusion. The engagement of a very diverse range of national and international stakeholders and activities has been highlighted as a key feature of successful natural disaster support programs. In Bank-supported natural disaster interventions, the private sector has emerged as an important stakeholder and potential partner, particularly after disaster has struck. However, as with all partnerships, care needs to be taken to match the intended role with actual capacity on the ground. Reconstruction initiatives, especially commercial ones, need to be carefully assessed against changes in effective demand in the context of aid flows and rapidly changing post-disaster conditions (IEG 2010a).

For example, IFC facilities established to support private sector companies in the reconstruction phase of the Asian tsunami disaster were used only to a limited extent because their pricing was not attractive, given the abundant liquidity in the market and aid money pouring into the affected countries. Local banks in Thailand and Sri Lanka received cheap long-term funding from their respective governments; the larger companies had adequate insurance coverage to repair/reconstruct their damaged properties; and most companies scaled down their new investments, thereby reducing their need for additional funds.

Leveraging existing private sector capacity is critical for effective emergency response,

Box 3: Some Factors Likely to Enhance Local Ownership of Disaster Response Projects

- Knowledge and skills are more likely to be retained if the project includes activities that communities can put into practice. For example, communities can practice mobilization skills and organization of events by implementing community workdays or simulation exercises.
- Coordination with government and local stakeholders is critical for legitimacy and sustainability. All local level initiatives **must** link to the larger national disaster management system.
- It is critical to get commitment from local partners and other participating stakeholders prior to commencing the project. This helps ensure everybody is clear on roles and responsibilities and avoids delays in short project time frames.
- Quality baseline data, including participatory needs assessments and a historical understanding of other similar interventions, are a critical component of building relevant and sustainable response projects.

Source: Aguaconsult Ltd. 2009.

even where such capacity is quite weak. The private sector can play a key role in infrastructure and logistics, local banking, and provision of physical capacity. Working with existing IFC clients near affected areas can bring major gains in speed and effectiveness. Such existing partners do not need screening for reputational risks and delivery capacity. Trust and familiarity allow the use of simple arrangements for payments and reimbursements. Partners with local presence have the knowledge necessary to ensure that help reaches intended beneficiaries (for example, a local bank in Sri Lanka was effective in directing livelihood restoration grants to local fishermen who had lost their boats in the tsunami).

“Piggybacking” on existing activities is also seen as advantageous in the case of social funds, whose institutionalized operational procedures provide an immediate implementation platform that can reach stakeholders who may otherwise be overlooked. Having an existing public works program running under the social fund allowed for a fast response to crisis in a low-capacity institutional setting in Tanzania (World Bank 2009c).

The main socioeconomic category highlighted for inclusion in disaster management activities is vulnerable people. For example, an international NGO report indicates that, as the focus turns to rebuilding large areas of Pakistan, donors and assistance providers should take the opportunity for reconstruction efforts to address the underlying vulnerabilities of affected people (Refugees International 2010). This can only occur by working closely with affected communities. The report notes that reconstruction funds often go first to landowners, large infrastructure projects, industry, or developers. The need to provide homes, security, and livelihoods for the poor and landless is often secondary, as is evident from the experience of an earlier earthquake in the region. The International Federation of Red Cross and Red Crescent Societies noted that after the 2005 earthquake in Kashmir, the failure of authorities to provide housing assistance to the landless was a major reason for long-term

population displacement and the prolonged existence of temporary shelter settlements (Refugees International 2010).

The importance of incorporating gender dimensions in disaster management has also been emphasized (Bennett and others 2006). The dearth of gender-disaggregated data has impaired the effective targeting of vulnerable groups and reinforced discriminatory practices. The overall Asian tsunami response lacked a consistent, quantified, and coordinated gender analysis, an omission that has resulted in some serious protection anomalies and the persistence of male-dominated decision-making structures that have largely gone unchallenged. In particular, gender disaggregated data on which to base targeted programs were largely missing in both the relief and recovery phases.

Damage assessment often overlooks the gender dimension of vulnerability (IEG 2010b). Disasters may present opportunities to enhance gender equality, but there are gender-related social constraints in many countries that contribute to slow progress. IEG has reported that it is often the case that the impacts of disaster are uneven and that marginalized groups need special attention (IEG 2010a). An awareness of this issue should be built into damage assessment processes, so that they take into account the differential effects of disasters according to income, culture, gender, location, type of home, and land tenure. If this is not done, the particular needs of the poor may be ignored in the immediate post-disaster period and the vulnerable may have to sell their productive assets, often including their land, to the better-off, as happened following the tsunami in Indonesia (IEG 2010a).

Partnership with NGOs can be important in reaching the poor. However, it is important to use adequate screening mechanisms to identify suitable NGOs. IEG’s review of community-driven development lessons from the Sahel (IEG 2003) finds that in Benin, NGOs with poor qualifications handicapped project performance, and in both the social fund and the food

security projects a large number of NGOs had to be suspended for unacceptable performance.

Even though pressures to act quickly are strong after disastrous events, it is vital to incorporate future disaster preparedness into recovery and rehabilitation programs (designed during the response phase).

As noted above, post-disaster situations provide unique opportunities (which conceptually fit within Phase 1 activities) to mitigate elements of disaster risk by preparing communities to better deal with them. Communities are particularly focused on such issues and are willing to act after disasters. Furthermore, government resources are mobilized, creating a uniquely favorable environment for implementation of such disaster preparedness components. However, the Sri Lanka Tsunami Emergency Recovery Program missed this opportunity (World Bank 2009g). Disaster preparedness elements were not built into the initiatives. Even though those coastal areas where the mangrove forests and coral reefs remained intact were less impacted by the tsunami than areas where prior environment denudation had taken place, no measures were taken to include disaster mitigation and preparedness initiatives, such as mangrove reforestation, in the program. These could have provided a unique opportunity to maximize the “build back better” approach.

Following the torrential rains and flooding in Algeria in 2001, the Bank supported the Urban Natural Hazard Vulnerability Reduction Project. This established and implemented a number of regulations and measures concerning urban infrastructure, which were expected to reduce the effects of any future flooding, particularly in Algiers (World Bank 2007a). Although there is no evaluation of the results of these measures, they illustrate that the Bank is now active in disaster risk reduction, drawing on its earlier experience in the field of response.

To incorporate future disaster preparedness into recovery and rehabilitation programs (which fall into the response phase), program

design should allow for a longer period of implementation, initially focusing on rehabilitation and later on disaster risk mitigation. The later phases should build on institutional and community resources mobilized during recovery and rehabilitation.

This lesson shows that the different phases of disaster management are conceptual and organizing principles, rather than chronological sequences. In fact, it can be seen that there are considerable advantages in building on disaster response programs to commence pre-disaster planning for any future event. This is because disasters provide a short but intensive window of attention for disaster risk reduction and mitigation opportunities, which fades away as other development priorities regain their higher profile.

Faced with the competing demands of rehabilitation/reconstruction versus long-term risk mitigation, the Bank has often focused on reconstruction. This approach can delay or reduce the implementation of risk mitigation programs.

ICRs of two Indian emergency recovery projects (World Bank 2003, 2009b) find that the integration of long-term goals (such as disaster management capacity building, drafting of seismic resistance planning standards, and ensuring quality control in dams reconstruction) into a disaster reconstruction project is likely to increase its effectiveness, but requires a longer (and more realistic) implementation period. As well as the large scale of such operations, nurturing and restoring the confidence of the affected population are time-consuming activities, although they play an important role in ensuring ultimate cost effectiveness.

In the reconstruction in Gujarat, the project required revision of planning and building codes to ensure that structures would be earthquake resistant. Although this caused initial delays in housing reconstruction in urban areas, the process speeded up over time as masons, engineers, and technical officers were trained and became familiar with the new requirements.

This suggests that, even within the project time frame, the effectiveness of disaster risk reduction had increased.

Information, communication, and data management systems have a vital role to play in disaster-related projects. However, they have often been found wanting.

Effective, consistent, and coordinated communication with recipient populations at all stages of the response—and with a concerted effort to include women in the dialogue—needs to be made a priority (Bennett and others 2006). This entails dedicated staff resources and tools, with efforts made to reach a communications protocol with the host government. A common strategy needs to be developed, including the use of public meetings, broadcast media, newsletters, and posters. The creation and use of a common beneficiary database, financed and endorsed by a central government body, is another early priority in the emergency phase. Required leadership and coordination skills include the basics of how to maximize the output of meetings. These skills should be promoted by all agencies and should form part of the induction training for operational staff, along with standard operating procedures.

The necessity to encompass the most appropriate technology within a coherent institutional structure has been emphasized in an assessment jointly produced by the United Nations Office for the Coordination of Humanitarian Affairs and the World Bank (OCHA and World Bank 2008). An important lesson that emerges from the report's case studies is that an effective disaster information management system requires a good technological platform, but also much more. Software programs for storing, sharing, and manipulating data for disasters are being developed at a steady pace, often in the aftermath of disasters. The real difficulty lies in anchoring these technological approaches in an appropriate institutional context, where they are supported by relevant and effective operating procedures; agreed terminology and data labeling; and a shared awareness of the benefits

of proper handling of disaster information.

Advances in information and communications technologies represent opportunities to create new solutions, including, for example, systems that allow remote units to enter data directly in the system using cellular or satellite networks. There is a potential to achieve exponential gains in the efficiency of disaster response operations. However, it is sometimes the case that simpler technologies are more flexible in an emergency situation, such as the use of portable flash drives to share spreadsheets in Mozambique (IEG, undated).

In the case of the Asian tsunami, the Tsunami Evaluation Coalition found that cell phones and satellite imagery emerged as important instruments of communication and coordination in the immediate stages of the emergency (Telford and Cosgrave 2006). Much of this technology was in the hands of the national private sector, emphasizing the importance of greater efforts to develop partnerships between local and international stakeholders, public and private, to improve the quality of available information and the speed of its delivery.

The Office for the Coordination of Human Affairs and World Bank report (OCHA and World Bank 2008) also highlights the increasing global recognition of the need to take the step from ad hoc disaster responses to the systematic ex ante development of disaster management infrastructure by vulnerable countries or provinces and districts at risk. Despite this recognition, few well-functioning systems for information sharing during disaster response periods have been developed.

Projects responding to natural disasters have proved difficult to finance effectively. Both ERLs and reallocation of existing resources have encountered problems in providing funds quickly enough or for long enough to achieve all their objectives.

The World Bank's main instrument to support activities related to natural disasters is the ERL,

which has a maximum duration of three years. This is sometimes seen to impose restrictions on the planning of support, because reconstruction can take substantially longer than this period. Reallocating resources from existing projects, another approach to emergencies, has been found to affect the ability to attain long-term development goals and to be less effective than specific reconstruction lending (IEG 2005).

Although shifting resources from existing programs to rehabilitation and reconstruction efforts with very high rates of return can be justified, experience has shown that new financing, well designed and managed by special disaster units that are authorized to respond quickly, tends to be used more effectively (IEG 2010c). Restructuring old projects is often politically easier than new lending and allows the Bank to support government entities that are already accustomed to working with it, but delivery by staff committed to the goals just abandoned is often not effective and eventu-

ally proves to adversely affect the programs from which the money has been removed.² Against these negative assessments, reallocation of funds fills an important niche in the Bank's ability to respond rapidly,³ particularly in large emergency situations, where the original purpose of the loans may no longer be viable in view of the disaster (IEG 2010b).

Notes

1. It can, however, be suggested that the governmental and institutional situation in Haiti was an unusually difficult one in which to launch participatory approaches.
2. IDB's 2004 evaluation, *Evaluation of Inter-American Development Bank's Operational Policy on Natural and Unexpected Disasters*, found major problems with loan reformulation for disaster-related projects and recommended measures to ensure that disaster management should become a high priority issue in national development programming.
3. IDA countries are not eligible for CAT-DDO status, which gives access to the most rapid fund transfer system.

5. Lessons for the Post-Disaster Phase (Phase 3)

The post-disaster phase includes activities in recovery, rehabilitation, and reconstruction, often building on preparation activities undertaken during the previous response phase. It also affords an opportunity to develop disaster risk reduction measures, which can be fully implemented during a subsequent pre-disaster phase (moving into Phase 1 of the next cycle).

Post-disaster recovery may best be pursued by strengthening existing institutions or by creating time-bound specialist bodies with the sole mandate of completing short- to medium-term reconstruction activities.

It is difficult to create effective new institutions in the aftermath of a disaster, unless their mandate and duration are defined very specifically. For the Sri Lanka Tsunami Emergency Recovery Program (World Bank 2009g), the creation of a new institutional set-up in the aftermath of the disaster to implement reconstruction efforts provided major challenges. These concerned the ability of the new body to take on the reconstruction task in such a short period of time, as well its sustainability. The Reconstruction and Development Agency received a large amount of funding from donors but could not build capacity to its optimum level and was ultimately prematurely closed down by the government and its functions given to the Ministry of National Building and Estate Infrastructure Development.

In a similar situation in Pakistan (cited as a comparative example in World Bank 2009g), the Earthquake Reconstruction and Rehabilitation Authority, which was created in the aftermath of the 2005 earthquake, performed well in developing capacity and effectively responding to the disaster. A factor contributing to this

success was that the Authority was formed with a time-bound yet clear mandate and was staffed through existing government resources, with additional key experts hired through donor assistance. It was, therefore, seen as a government-led, but donor-assisted, entity having the full support of other implementing government line agencies.

If existing institutions are seen as the best option, weaknesses, gaps, and capacity constraints in the overall functioning of government structures need to be strategically addressed in advance of major recovery and reconstruction efforts.¹ This process should include attention to estimating and agreeing on incremental staffing increases before the program is implemented on a large scale. This should be based on estimates of incremental increases in workloads on program staff at national, regional, and local levels.

A community-driven approach to recovery and reconstruction can significantly help build up local capacities for future project identification, planning, and implementation (including procurement and financial management), as well as in ex post operation and maintenance.

Such an approach need not be expensive. For example, the Samoa Cyclone Emergency Recovery Program (World Bank 2009f) found

that the size of community grants used for identifying, planning, and undertaking both structural and nonstructural solutions need not be large. What proved more important in this program was the participatory process by which appropriate solutions were identified, so that there would be continuing community commitment to provide additional resources and to ensure that the assets developed were maintained and well used after the “project” closed. Central government ministries played an important role in this regard, either directly through their own structures or through NGOs and community-based systems (or both). This included building interest in and “marketing” the availability and purpose of grants; ensuring that the grants were easily accessible by communities for eligible activities; providing engineering/environmental and other technical inputs to communities at key points; and encouraging communities to take ownership of the eventual assets.

In contrast to the Samoa project, the Sri Lanka Tsunami Emergency Recovery Program was hampered by inadequate social mobilization. Although under its housing program there was provision for formation of village rehabilitation committees, there is little evidence to suggest that this was widely practiced or that, where formed, these committees significantly contributed to mobilizing communities. NGOs involved in the housing program also did not have social mobilization as a primary focus area, but concentrated on contractor-driven reconstruction under a donor-driven housing program.

A continuous information dissemination campaign was envisaged under the overall strategic communications vision of the Bank’s housing component, but this campaign did not materialize. There were a few housing information products, such as frequently asked questions and posters, developed on an as-needed basis, but there was no overall effective dissemination plan.

Among other effects, the limited strategic interventions in communications resulted in a

lack of understanding of the program and its objectives, which translated into lack of commitment in implementation support. This aspect of the Sri Lanka program shows that information dissemination and social mobilization need to be treated as priority components to ensure that all potential participants actually have the opportunity to benefit from Bank support.

In recognition of the importance and difficulty of encouraging strong community engagement, the Bank has provided detailed advice (World Bank 2009b) on appropriate methods, particularly through the use of social funds and community-driven development approaches.

In cases of major reconstruction of communities following a natural disaster, an approach that gives maximum ownership and control to homeowners themselves has major advantages over the contractor-led system (Box 4).

IEG has reported that allowing homeowners to manage the reconstruction of their own homes (rather than engaging contractors) worked well in two India projects (World Bank 2003, 2009b), as well as in Turkey (World Bank 2007d). In India, where people were given funds to repair their own housing units, most families actually economized enough to self-build completely new homes. In the Sri Lanka Tsunami Emergency Recovery Program, the approach adopted was driven by homeowners themselves, supported with necessary technical assistance. This proved a success and allowed affected communities to develop ownership of the program, which yielded strong results. Many beneficiaries stated a preference for the system adopted by the Bank, rather than the contractor construction method used in a parallel donor-driven program. Homeowners under the Bank approach had the incentive of constructing houses of their own choice and specifications within safety guidelines defined by the program. They also received useful training in construction and supervision, and their participation in the reconstruction of their houses gave a strong sense of ownership and empowerment.²

Box 4: Key Advantages of the Homeowner-Driven Approach to Reconstruction

- Ownership by affected communities of housing solutions
- Greater room for inclusion of beneficiary choices (especially concerning architectural aspects)
- Promotion of safety culture and awareness
- Skill development of affected communities
- Faster pace of reconstruction (interest of beneficiary)
- No artificial inflation of material prices because of reduction in pressures on the materials supply chain through staggered construction (especially in post-disaster reconstruction situations).

Source: World Bank 2009g.

Although programs that support homeowners in reconstructing their own houses have been found broadly effective, they need to incorporate specific systems to identify and support vulnerable categories of the population to ensure that this group is reached.

The Sri Lanka Tsunami Emergency Recovery Program aimed to provide assistance to eligible homeowners to repair or reconstruct their homes. Although the targeting achieved through this process was broadly effective (World Bank 2009g), it became apparent that there was a need to provide special assistance to vulnerable groups, such as female-headed households and the elderly, so that they could reconstruct their houses in a timely manner. Without this attention, these groups appeared to be disadvantaged. However, the project did not have any special arrangements to cater for this particular segment of the affected population.

The (India) Gujarat Emergency Earthquake Reconstruction Project also found that its homeowner-driven approach was popular and effective in assisting reconstruction. The high levels of satisfaction among beneficiaries pointed to the perceived and actual benefits of the homeowner-driven program. However, its assumption that all homeowners could build within a particular target period excluded beneficiaries who were unable to meet the program's deadlines. These beneficiaries then faced increased construction costs (because of inflation), which had a further negative effect on their completion rates. They thus became doubly disadvantaged.

The program could have been improved if cofinancing opportunities had been available to mitigate increases in construction costs and/or if partnerships had been formed with humanitarian organizations to support vulnerable families and to monitor and support “nonstarters.”

By their nature, emergency recovery and reconstruction projects and programs are likely to be prepared under considerable time pressure, during the medium-term response phase. This haste should not lead to a reduction in systems to ensure accountability and transparency of programs, particularly because these activities may disburse large sums in a short time period.

In its responses to the Asian tsunami, the Bank promoted a range of measures to increase transparency. In view of the risk of funds misdirection, participatory community monitoring, such as that used in Indonesia, may be valuable. In the Indonesia Kecamatan development program and tsunami emergency projects, action was taken to minimize corruption by posting planned works and costs on village notice boards; having village committees audit neighboring villages; having communities physically sign off on contractor quantities delivered; and putting in place a strong group to deal with (anonymous) complaints.

The Philippines Bicol Power Restoration Project provides another good example of how borrowers and the Bank can efficiently and effectively work together to ensure acceptable accountability procedures during the response to an

emergency situation (World Bank 2009d). The project was based on a clear assessment of the capacity of the main participating institution, TransCo (a government-owned power transmission company), to satisfy Bank accountability requirements and on the establishment of agreed processes, which resulted in fast and generally problem-free implementation.

Overall, four aspects of the approach contributed to the success of the project: (i) effective collaboration with a receptive institution; (ii) flexibility and responsiveness, but applied within a careful assessment of agency capabilities and clear application of financial and governance requirements; (iii) effective safeguards management; and (iv) complementarities of the assistance with sector reform processes. Accountability mechanisms were addressed in advance through careful review of TransCo's procurement processes and determination of flexible arrangements that met Bank standards. After early assessment, financial control procedures were put in place through a well-staffed internal audit team that would bring the project within its ambit and collaboration between the Commission on Audit and TransCo to address anomalies in accounts that would be resolved prior to Bank appraisal of the next potential project with TransCo.

The India Gujarat Emergency Earthquake Reconstruction Project is another project that shows that transparency, equity, and accountability can be achieved, even in difficult emergency circumstances, if appropriate procedures are designed and incorporated as integral parts of the overall intervention program (World Bank 2009b). The project supported the repair and reconstruction of over 1 million houses. This was achieved with minimal grievances and allegations of corruption, reflecting successful incorporation of transparency and people's voice. A particularly important element was the approach adopted for damage assessment. Although a "technical" exercise, this benefited from substantial community participation, which helped ensure transparency and social acceptance. Another important aspect of the

project was having housing fund disbursement linked to construction progress (for individual housing); this helped ensure effective use of funds. Without this link, there was a risk that beneficiaries might use funds for purposes other than their intended use or at least be perceived to do so.

Transparency and accountability are not only important for each institution offering assistance. The relationship between the programs of different international stakeholders is also extremely significant. If communities and households with similar needs are treated differently by various programs, major problems can arise. In this respect, accountability to the affected population is a cornerstone of good coordination practice (Bennett and others 2006; Telford and Cosgrave 2006). In the case of the Asian tsunami, effective joint-agency communication with the client population, including a complaints procedure and regular updates on the recovery process, was not an early priority. Communication and consultation between the international community and affected people was sporadic and uncoordinated, leading to widespread misinformation and resultant frustration among stakeholders.

In any disaster-related activity, it is important to ensure from the outset that appropriate systems are put in place to deal with complaints and grievances.

Even if accountability and transparency mechanisms are effective, there remain possibilities that some eligible people, particularly among vulnerable groups, may find it difficult to access intended resources and that grievances may be raised against the intervention. The Bank's Sri Lanka tsunami program included a robust grievance redressal mechanism (GRM), under which village-, district-, and divisional-level Grievance Redressal Committees were established to deal with land issues and other housing related complaints (World Bank 2009g). To deal with grievances related to housing damage, special district teams with the required technical skills were formed. Part of their work

was to reassess the value of houses, whose owners objected to the original assessment made by the damage assessment teams. The district and damage assessment teams comprised different sets of officials, in order to avoid any conflict of interest. Despite these efforts, during implementation the GRM did not function to its full potential, mainly because of poor documentation of grievances and the manner in which the regional housing units were wound up at the end of the program. However, the GRM did serve the purpose of increasing accountability and providing the beneficiaries with a framework through which to resolve their complaints. Some requirements and benefits of such systems are shown in Box 5.

Flexibility, especially with regard to procurement procedures and project revision as post-disaster events unfold, is a particularly important attribute for natural disaster-related projects.

Flexibility of project design in disaster-related operations facilitates implementation and provides a greater opportunity for achieving project objectives. In the Sri Lanka Tsunami Emergency Recovery Program, the project design was kept flexible (World Bank 2009g). A number of contingent components were included, with the idea that the scope of work and the areas of intervention would be adjusted as project implementation proceeded, based on identification and prioritization of emerging needs. It was prepared on a fast-track basis under emergency procedures, and it was not possible to cater for all

needs, which changed frequently as the disaster situation unfolded. The ICR concludes that the flexible approach used by the project worked well and would be beneficial to the design of other emergency operations.

The Grenada Caribbean States' Emergency Recovery and Disaster Management Program (World Bank 2006a) showed the value of flexible emergency procurement procedures in the context of urgent recovery needs. The length of time before switching from flexible to regular procurement methods should depend on the magnitude of the disaster, the damages incurred, and the pace of implementation on the ground. The Grenada project successfully demonstrated this principle, as procurement processes reverted to standard procedures two years after the hurricane hit, adapting to the situation in the country.

Because of the short preparation time and the nature of emergency operations, ERLs are riskier than standard Bank operations. This is particularly true concerning expediency and controls over procurement processes, and it is important to consider measures that mitigate risk. One such measure is having a procurement consultant on staff closely following the project throughout its lifetime. This calls for a relatively large supervision budget, a good percentage of which should be available to pay for a procurement specialist. This approach was adopted in the Iran Bam Earthquake Reconstruction Project, and the ICR reports that this contributed substantially to risk reduction (World Bank 2010a).

Box 5: Requirements and Benefits of Effective Grievance Redressal Mechanisms

Requirements

- Structured documentation, compilation of grievance data
- Grievance tracking and redressal (response-time) monitoring systems
- Central oversight and control of grievance redressal functions, and decentralized grievance resolution arrangements with local participation.

Benefits

- Speedier resolution of grievances, leading to faster disbursements and program completion
- Progressive incorporation of beneficiary and community feedback in the project implementation framework and arrangements
- Reduced risks to reputation emanating from lack of beneficiary satisfaction.

Source: World Bank 2009g.

Another important point is that streamlined procurement processes in emergency situations are needed on both the country and the Bank sides to ensure faster delivery times. Although the Bank may adopt fast-track procedures internally, borrowing countries often do not have corresponding emergency procurement processes.

Other flexible procurement measures, which have contributed to results of natural disaster projects, include the following:

- Hiring key borrower project staff well in advance of project start-up and providing them with training in Bank procedures, to enable the project to move quickly on approval (World Bank 2010a).
- Using “slice and package” approaches for construction contracts. Under these, a large homogeneous project is sliced into smaller similar contracts that are bid simultaneously to attract the interest of both small and large firms. Firms may offer bids on individual contracts (slices) or on a group of similar contracts (packages), and award is made to the combination of bids offering the lowest cost to the client (World Bank 2009f).
- In countries where agencies have no incentive to submit invoices or to identify eligible investments, using small subprojects with simplified financial management processes, especially those related to the validation of disbursements and expenditures and to the translation of these expenditures into Bank disbursements (World Bank 2005b).

Even more than “conventional” development projects, interventions dealing with natural disasters need strong monitoring and evaluation (M&E) systems with a clear results focus. Monitoring that is independent and credible is essential to give beneficiaries confidence in the government’s support and to demonstrate to donors that funds are being well spent. These measures are particularly important in such situations, because the rapid expenditure of large sums may lead to specific concerns about how their effects can be systematically tracked.

It is important that natural disaster-related project deadlines should be placed within a clear “results framework” to promote effective project implementation (IEG 2011a). This framework would include the scope and specificity of objectives, congruence between project interventions and objectives, links between objectives and measurable indicators, and effective M&E.

In the case of the Sri Lanka Tsunami Emergency Recovery Program, reporting and monitoring were carried out at various levels, but they were not part of an integrated reporting, monitoring, and evaluation system. Although regular reporting was undertaken at the regional level, the upward flow of data to bodies where meaningful evaluation was supposed to take place, promoting the informed downward flow of strategic direction, was not fully realized. Such a system could have assisted the government in even better implementation of the project. The ICR derives the lesson that an effective reporting M&E system is essential to enable informed decision making at both policy and operational levels. Although this lesson appears to be realistic, it is derived from the unsatisfactory results achieved without such a system, rather than from an evaluation of the operation and contribution of such a system as practiced.

In the Zambia Emergency Drought Recovery Project (IEG 2007b), efforts were made to address the limitations of the initial project indicators during the first implementation review mission. The project implementation unit was subsequently tasked with identifying additional project performance indicators but ultimately failed to complete the task.

The Iran Bam Earthquake Emergency Reconstruction Project (World Bank 2010a) provided a positive example in this area. Even though emergency operations do not currently require outcome indicators, the project invested in an M&E consultant and a social auditor, which was uncommon in similar projects. The ICR notes that this reduced the risks to reconstruction activities, which were felt to be strong because

Box 6: Guiding Principles for Monitoring and Evaluation in Natural Disaster Interventions

- Define and agree with stakeholders what will be monitored and evaluated early in project development.
- A mix of qualitative and quantitative approaches is likely to be the most useful for M&E in a post-disaster situation. Participatory performance monitoring and small-scale household surveys are two especially useful qualitative tools.
- Damage assessment data are a critical source of baseline information for evaluation, another reason to promote the sharing of this information among agencies.
- Government can simplify the task of tracking reconstruction if it provides agencies with guidance on the indicators it wishes to be monitored at the project level. The indicators to be monitored should be based on the reconstruction policy.
- Good M&E principles are not different in a post-disaster situation, but to apply them may require more flexibility and imagination.
- If government is not prepared to aggregate data collection from multiple agencies to monitor reconstruction, agencies in one sector or region should consider coordinating the monitoring among themselves.

Source: World Bank 2010c, chapter 18.

of the limited experience of government both in such major programs and in working with the Bank. A robust M&E system was designed and implemented and contributed to the fulfillment of reporting requirements to the government and the Bank. This experience shows there are measures that can be taken to develop outcome indicators and to ensure that relevant data are collected to verify progress.

The Bank has provided specific guidance for M&E approaches in disaster related projects (Box 6).³

Notes

1. These issues were recently discussed at the World Reconstruction Conference (<http://www.wrc-2011.org>).
2. The homeowner-driven approach may be less effective in urban than in rural housing situations. Recent discussion of these issues took place at the World Reconstruction Conference 2011.
3. This guidance appears to have been derived from a broad review of international best practice in the disaster management field, including the World Bank's experience, rather than from specific evaluation sources.

6. A Lesson Concerning Slow-Onset Disasters

Slow-onset disasters, such as droughts (which often become recurring events), are a subcategory of natural disasters that pose specific challenges. There is a need to develop and implement strategies that deal with development and humanitarian issues at the same time. This requires collaboration between different types of agencies, which have traditionally found it difficult to work together.

The European Commission conducted a detailed review of responses to the Sahelian droughts (ECHO 2007). It found that the prevailing model in the Sahel of moving from development work to emergency methods and back to development work each time a crisis arrives has not worked and is no longer appropriate to the situation of vulnerable people in the region. In their haste to respond to disasters, humanitarian agencies have often bypassed local government structures and provided relief directly to local people, with little regard for local or national-level representatives, thereby undermining the role that these institutions play outside emergencies. Bypassing locally accountable institutions in favor of a more rapid impact has also allowed more powerful local stakeholders to “hijack” the process for their own benefit, which further reduces the confidence of local communities in the capacity of the structures meant to represent them. Although investing and strengthening existing local institutions would have taken longer, it could also have reduced vulnerability in the longer term.

The traditional role of humanitarian assistance in saving lives and helping populations get back to where they were before disaster struck proved less clear in the slow-onset disasters of the Sahel region, where it was also seen as necessary to develop systems to reduce the exposure to risk of vulnerable communities. There was therefore

substantial “mission creep” of humanitarian agencies into recovery and reconstruction areas normally regarded as the territory of developmental agencies. The case of the Sahel droughts showed that the divide, which has been seen as a barrier to good development work for years, remains unresolved. Rather, it has been reinforced by separate budget and administrative systems and, more importantly, by different institutional cultures and strong personal identification with one side or the other. According to the European Commission study (ECHO 2007), the realization that the two approaches need to be made to work together is not yet widespread and is still principally found among personnel in some NGOs that already have operations in both fields.

The European Commission study proposes that the adoption of an approach based on a sustainable livelihoods framework¹ may offer opportunities for common work between humanitarian and development institutions and between these departments within institutions. Such an approach “provides an analytical framework that promotes systematic analysis of the underlying processes and causes of poverty. It is not the only such framework, but its advantages are that it focuses attention on people’s own definitions of poverty and it takes into account a wide range of factors that cause or contribute to poverty” (DFID-ODI 1999). An underlying lesson is that the basis for

any planning in the Sahel is that drought will happen at some stage of any initiative—during planning or implementation or after completion. It follows that projects and programs should aim to reduce both vulnerability and the impact of drought, instead of focusing on development objectives that fail to take account of the near inevitability of future droughts.

The World Bank has assisted several African countries to establish drought recovery systems. Assessments of these projects raise the same challenges, as noted by the European Commission review (ECHO 2007). For example, in the case of the Ethiopia Emergency Drought Recovery Project, Bank assistance to the national system of drought response provided substantial support to public works programs. These public works essentially performed two roles: relief, through cash transfers associated with employment generated, and recovery, through the build-up of the (community) asset base (IEG 2011a; World Bank 2007b). The ICR concludes that emergency contexts sharpen the trade-off between relief and recovery and that the need to provide urgent relief may compromise the technical quality of recovery activities or of arrangements for long-term “ownership” and sustainability.

Assessments of the Malawi Emergency Drought Recovery Project draw a similar conclusion (IEG 2007a; World Bank 2005a). There is a conflict between the ERL requirement for quick implementation and the incorporation of medium- or long-term disaster management objectives. Food crises can be prevented by early interventions.

For example, in drought-prone areas, governments and the Bank have to be alert to the first signs that farmers are selling animal herds and consuming seeds and must quickly intervene to prevent the drought triggering a full-fledged food crisis. Relief efforts for recurrent disasters (such as droughts) need to be built on data systems that are both accurate and current. Such systems may need technical assistance for several years, before they are sustainable. Effective approaches and funding options must therefore address both and short-term response and long-term recovery measures.

Assessments of the Zambia Emergency Drought Recovery Project further develop this perspective (IEG 2007b; World Bank 2006b). They suggest that short-term and long-term objectives should not be combined in one lending instrument. As in the other drought projects, activities fell between two types of interventions: crisis mitigation and long-term development. The ICR indicates that this project would have been more successful if it had been more clearly focused on crisis mitigation activities. It proposes that, when engaging in emergency operations, the Bank should focus on its comparative advantage, which lies in such financial areas as budget and balance of payments support. Such support would be designed to build the government’s own capacity to respond to emergencies by building and setting aside sufficient financial resources specifically for this purpose.

Note

1. For a brief overview of sustainable livelihoods approaches, see Clark and Carney (2008).

7. Applying the Lessons

Since the publication of IEG's 2006 evaluation on the subject, lessons have continued to emerge concerning natural disaster response activities. These lessons have here been organized according to the phase of the disaster management cycle in which they first occur.

One overriding lesson concerns the advantages of reducing risks and increasing preparedness within the national development strategies of countries that are prone to disasters. Measures taken in pursuit of these objectives are believed to deliver substantial gains in the effectiveness of disaster response, when events occur. However, formal evaluations of the impacts delivered by risk reduction and preparedness are so far largely absent.

It is also clear that every natural disaster has unique characteristics, so that the lessons presented here need to be carefully assessed for their applicability in each case. They provide a set of guidelines, which can be examined for their relevance to specific disaster situations; this may help strengthen interventions and make them more effective and efficient for affected countries, as well as for the Bank's assistance programs.

Some of the lessons derived from project and program experience in the area of natural disaster response would apply to projects in any field, but are even more important in the case of disaster projects, because of the situation of social, economic, institutional, and governmental disruption in which they operate.

There is also a distinctive set of lessons concerning the processes through which disaster response can be prepared and planned for in advance. These relate to the professional area of disaster risk reduction within the overall disaster management cycle and to the need to raise its profile both in affected countries and in international organizations. Risk reduction should have a central role in any disaster-prone country's overall sustainable development strategy and should therefore form an integral part of donors' programs and country strategies.

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