Conclusion

This final chapter first draws some conclusions about the state of disasters in general, their predicted growth, and the needs for the future. It raises some of the challenges faced and discusses who has roles to play in confronting them, but the emphasis is on the importance and benefits of bringing affected communities into infrastructure reconstruction as part of the planning and implementation process. I then present conclusions from the PERRP project. I focus on how a structured community participation process benefitted both this infrastructure reconstruction project and the local communities, listing several significant and practical benefits. This chapter closes with three batches of recommendations—first, for donor agencies, policy makers, implementing agencies, and aid and reconstruction planners; second, more specific recommendations for implementing agencies on integrating the social and technical elements of the work; and finally, specific recommendations for social teams.

General Conclusions

Around the world, disasters are growing (and are predicted to keep growing) in number and intensity, suggesting that there will also be an increase in the need for reconstruction and related agencies, skills, and services.

Construction is about more than steel and cement, and this is especially true in disaster reconstruction scenarios. Not only have buildings and other infrastructure been destroyed—possibly taking many lives, creating loss and trauma—but the community and sociocultural foundations may also have been shaken. The reconstruction planning process should therefore be part of broader recovery efforts—in addition to replacing lost infrastructure, NGOs and aid agencies should also help local institutions recover and support local capacity development.

In many locations, even without a disaster, challenges in infrastructure construction result in projects being slow, stalled, or even abandoned.

The burgeoning literature on infrastructure construction worldwide features wide-ranging discussions on the problems and challenges to construction, and there is general agreement that in developing countries the construction industry is plagued with certain common issues (Mir, Tanvir, and Durrani 2007: 1). The issues could be categorized as managerial, technical, financial, policy related, procedural, environmental, or legal. They may become manifest at the construction site in innumerable ways: a lack of skilled contractors, defective contract documents, corrupt contracting procedures, poor foreign exchange procedures, and so on. Still, in the literature, there is little mention of the local people and the issues they may be facing, or the ways in which construction and the people may have an impact on each other. Few studies focus on how some of the most serious problems in construction emerge from interactions between construction sites and the local people. Moreover, even in the disaster studies literature, the sociocultural side of infrastructure reconstruction is barely mentioned. There is a need for much further research on the kinds of realities, problems, and needs that arise from interactions between construction sites and their sociocultural contexts.

At the same time, the subject of local people and their communities—wherever they may be in the world—is highly complex. As chapter 3 discusses, communities are composed of subgroups that are often divided by such factors as ethnicity, clans, beliefs, race, or political alliances, resulting in some people holding power, leaving others with little or none. For community participation to occur on a representative basis, it is necessary to know who are the dominant and who are the dominated. Sociocultural specialists must ask: What is the local social structure? How can power be shifted and shared so that participation is representative of the community?

Communities are far from being quaint, harmonious, and unified places—a common misconception. Rather, conflict is common in communities around the world. It may be subtle, overt, or predominant. Conflicts in communities often stem from multiple causes arising out of the above community divisions; for construction, some of the problems may come from these underlying social causes. Moreover, projects such as construction can easily spark conflict due to the money, jobs, and other opportunities they bring. Something as seemingly simple as the arrival of a construction contractor can ignite reaction, as such events frequently occur without local consultation, and so local people can react against them. Contractors often impose or act in other ways that are not accepted, resulting in violence, court stay orders, or other actions that lead to long, costly delays. In the reconstruction process in Pakistan such tension was one of the main causes of slow or halted construction.

Who is part of this scene, and who may have roles to play? Families, NGOs, and governments will likely continue to work on rebuilding housing and other small-scale facilities. However, reconstruction of large public infrastructure is the realm of large commercial design and construction companies, and of NGOs with similar advanced capabilities, due to their expertise. As disasters increase, demand for their services and those of related for-profit or nonprofit consulting and facilitation services will also likely grow. Governments, donor agencies, policy makers, and aid planners need to lead the way in involving sociocultural specialists in infrastructure projects. Such specialists include practitioners, researchers, academics, and consultants, as well as students across the full gamut of sociocultural and technical fields: disaster, development, and conflict resolution studies, and architects, engineers, and construction managers.

Structured, representative, guided community participation can make a significant difference in disaster reconstruction projects, as it can help improve project efficiency and effectiveness while significantly enhancing local capacities for recovery and development. For this to occur, such disaster reconstruction projects need to include a social program and adapt it for each situation, drawing on examples such as PERRP.

Conclusions from PERRP

A year after the earthquake, when the PERRP team arrived in Pakistan to start work, reconstruction in the country was already in trouble. Hundreds of implementing agencies were working in different sectors of disaster relief, and over fifty agencies were present to carry out hundreds of projects to reconstruct thousands of buildings. Yet, among these many agencies, there were common complaints that many of their sites were already stalled, unable to proceed. This pace of reconstruction and completion never significantly improved. Even by the twelfth anniversary of the quake, the media reported that only a fraction of the planned reconstruction had been completed: thousands of schools had not been rebuilt, and "concrete skeletons of unfinished schools litter[ed]" the earthquake zone (Naviwala 2017).

Early on, the implementing agencies identified two main categories of problems: inept local contractors and conflict. Some of the hurdles included cost overruns, high worker turnover, and contractors' attempts to manipulate projects, to change designs, or to use different materials than had been agreed upon. Yet most problems were of a social nature: often people in the local communities were already fighting over other problems, but then got into conflict with the contractors, resulting in vio-

lence, sabotage, blocked access to the construction sites, and court stay orders. These social problems caused long costly delays in construction and, sometimes, even abandonment. When the people's ideas and issues are unknown or ignored, construction projects are at risk; when these factors are carefully considered, however, the opposite result can occur. As shown in PERRP, it is possible for a construction project to prevent or mitigate many social problems by involving the local people. Community participation in reconstruction can thus benefit both the construction project and the people and their recovery.

Of all the agencies working in reconstruction in postquake Pakistan, PERRP was the only project that had a dedicated social team with a structured community participation program that focused exclusively on reconstruction. Other projects left this work—including problems between contractors and community members—either to technical personnel who lacked time and relevant skills or to government departments, which often did not respond effectively. Some of the agencies had teams of social mobilizers, but these teams were busy with work in other sectors—in water and sanitation, health, livelihoods, and so on. When problems inevitably arose, solutions were attempted on an ad hoc basis, which often did not work.

Benefits of Community Participation to the Project and to Local People

As demonstrated in PERRP, strong construction management and structured community participation can save a great deal of time and prevent many problems while also significantly adding to local capacities.

- As a result of PERRP approaches, no court stay orders were issued, only eight out of the project's fifty thousand construction days were lost to conflict, and all but two of the seventy-seven schools and health units constructed were completed on or ahead of schedule.
- PERRP led communities to form representative committees with three main purposes: to prevent or solve community problems related to construction, to help the schools improve education, and to maintain the new buildings—this last purpose being held in shared responsibility with the government.
- While much reconstruction stalled over land issues, PERRP's first assignment to each committee was to have the land issues settled before construction could proceed. This was achieved in only one day at each site, well before design or construction even started. This first step saved enormous amounts of time throughout the project,

and it also resolved land disputes that had festered for years, giving relief to those affected.

- Various tools developed within the social team, which are listed in the recommendations below, increased cooperation and reduced the flare-ups of conflict that were common in the other reconstruction efforts.
- On a day-to-day basis, with close coordination and agreements between the technical and social components, the committees were able to anticipate the needs of the contractors and have help ready—for example, to lend extra land or provide a water supply.
- Although being from poor communities, committees contributed thousands of volunteer hours and mobilized resources with significant cash value.
- Community input to design helped improve the functioning and cultural suitability of the buildings, and saved costly design mistakes.
- The cost to include a social team was a small fraction of the project budget—the PERRP social team constituted only 6 percent of the project personnel—while the costs saved by the social team, although not calculated, would have been enormous.
- Through creating a friendly, respectful partnership, there was goodwill among the local people, contractors, project staff, clients, and local government officials. It was a win-win situation.
- For local people, such participation was a new experience. One of the most common comments by community members to social mobilizers was: "Before this project, nobody had ever asked us to participate to do anything. When you first started talking to us about having our community participate, we did not know what you meant, but now we understand and like it a lot. We wish others would ask us too!"

As detailed in chapter 3, communities in this region and project were notable for their stratified layers of power. Each community and subcommunity was hierarchical and heterogenous, with divisions into social groups based on caste, kinship, ethnicity, tribal group, sect, political affiliations, and a host of other factors. Tensions and conflict were common, fanned by the region's history of war and continuing frictions. Even before the disaster, the earthquake zone was among the poorest areas in Pakistan.

Even so, members of those communities also had strong capacities on which PERRP capitalized: a strong desire for recovery and development, a willingness to organize and work with the project, influential people and customs for conflict resolution, and skills from other experiences that they could bring to reconstruction. The PERRP social team deliberately looked

for these strengths and capacities; even in the most divided or conflictual situations, there may be people or customs that can support reconstruction work—a fact too often overlooked. The idea is to identify the local strengths and then ensure that they are recognized and put to work in the project process.

PERRP was a rare if not unprecedented opportunity for local communities to choose representatives from different social groups to form committees to work with the project. The committees were then led through a structured, step-by-step process supporting the technical work before, during, and after construction. Capacities were built in areas such as planning, communications, participatory decision-making, resource mobilization, group formation and management, conflict prevention and resolution, data collection and monitoring, and earthquake-resistant construction.

As committees developed their skills and succeeded in their project duties, their profiles and respect in their communities rose, drawing in more willingness to participate and contribute. Each step in the process increased committee members' confidence and prominence, and committees took initiative to contribute—clear signs of renewed vision and empowerment. This community participation demonstrated how people and communities—even those with deep divisions—can work together to achieve a common goal.

In addition to ending with a beautiful new building in the shortest possible time, which would benefit generations to come, each community's exposure to this new experience had the potential for long-lasting impact. For roughly three to four years in each community—the duration of the construction—local people had an experience that would raise their expectations about how other projects should be managed and how they could participate in them. Although the committees ceased to function once the project was completed, members could carry all these new skills and experiences to other endeavors.

Lessons Learned and Recommendations from PERRP

For Donors, Reconstruction Planners, and Implementing Agencies

- A social component should be included in every disaster reconstruction project, but for participation to happen at the "bottom" in a such a project, its initiation may need to come from the "top." In PERRP, community participation was a prerequisite required by the donor, USAID; and the implementing agency, CDM Smith, put it into practice from top management downward.

- Given that disaster reconstruction takes place within wide sociocultural contexts that have strong implications for the project, a social component with sociocultural experts should routinely be included alongside the technical team—the architects, designers, and engineering, environmental, and other technical specialists—and the project's other professionals in human resources, finance, information management, and so on.
- Get past the rhetoric. For decades already, no matter the sector, donor agencies have expected or required levels of local participation, but it is often vaguely stated and applied in name only, with little accountability. As part of a project bidding process or proposal preparation, potential implementing agencies should present specific plans that detail how they intend to include a community participation program: its purposes, activities, and key progress indicators, as well as information on how it will be carried out and monitored. As part of the regular reporting on the project as a whole, donors should require reporting on the sociocultural team's progress. Along with compliance expected for such matters as building standards, accessibility for the disabled, environmental concerns, anti-corruption practices, financial accounting, and health and safety regulations, there needs to be at least a basic framework—including guidelines, standards, and compliance requirements—for participation by the stakeholders.
- To emphasize that local participation is an integral part of the project, make the head of the social program a member of the senior management team. Like other members of this team, the head of the social program should be responsible for both high-level decision-making and their team's work in the field. Have the senior management team speak with a unified, consistent voice in all matters, including community participation.
- Plan for follow-through and sustainability, physically and institutionally. If the donor expects long-term operation and maintenance of the newly built facilities, they should make agreements and plans for this at the earliest stages with owners or authorities. It may be unrealistic for the end users—for instance, the teachers, parents, and students of a government-owned school—to take much or any responsibility for their facility if the owner is not engaged to play a part. Create incentives for ongoing institutional support.
- Design and construction companies that can demonstrate practical know-how—not only to "build back better," but also to "empower local authorities and communities" (UNDRR, n.d.a)—will be reflecting the some of the most valued skills among international disas-

ter authorities, donors, planners, and policy makers, which will give them a competitive edge.

For Social-Technical Integration

As part of the windup of the PERRP project, some debriefing and evaluation exercises were held internally. One of those exercises, described in chapter 6, was a focus group consisting of selected project engineers and construction managers, who provided their observations and comparisons of construction management inside and outside of PERRP. A second focus group met to analyze PERRP; this focus group, comprising the same eleven engineers and twelve members of the social team, had a combined total of over five hundred years of experience in construction and community mobilization in Pakistan and the region. The key topic discussed in those sessions was, if another disaster occurred somewhere, and you were asked for advice on construction/community matters, what would you recommend?

For the project engineers and construction managers in PERRP, it was a new experience to have a social component and structured community participation, but having the component was unanimously recommended as it made their work easier and got better results. These two focus groups also provided recommendations specific to the integration of technical and sociocultural teams.

- Accept that some of the challenges on a construction or reconstruction site come from negative interactions between the construction team and the people who live in the vicinity. Local complaints should be heard and considered valid, and they should receive a fair, quick response. When such occurrences are ignored, they can cause untold loss to the local people and can delay construction.
- Do not expect a reconstruction project's technical or management staff to be able to solve problems with local people. Having a social team frees up the engineers and other technical personnel to concentrate on their own specialized work.
- Communicate. Social and technical specialists may have no experience of working together and may even resist it. Be open about this with each other and decide how the work will be divided but coordinated.
- Plan for the technical and social staff to be trained together so they can better learn from each other and increase their understanding of and support for each other's roles. They should work as counterparts, advancing together on a joint plan.

- Specify steps. As each construction job is different, the engineer and construction managers need to specify their step-by-step critical path for design and construction. From that list, the social specialists can plan the step-by-step community participation process to facilitate design and construction.
- Take a holistic look together. With the social and technical teams, look ahead for all the things that could go wrong in design or construction that involve local people. Take both a problem-based and a capacity-driven approach. Do not wait to react to problems; instead, foresee what they will be, and then plan ahead, using capacities to the maximum to prevent problems or resolve them if they occur.
- Develop tools. The participation, management, and conflict prevention tools that the focus groups identified as the most helpful in PERRP were the Committee-Contractor Agreements, codes of conduct, and communication protocols that separated but coordinated the work. For all parties, cooperation was facilitated by having grievance procedures that both got fair responses and were simple and quick.
- Encourage both the social and technical teams to do no harm and to be culturally sensitive and conflict sensitive.
- Solicit design input by community members in order to generate local interest, develop designs that suit the end users, and avoid cultural mistakes that will have a negative impact on usage of the new buildings.

For Sociocultural Specialists and Community Participation Teams

In addition to providing recommendations for technical and sociocultural team integration, the focus groups also developed specific recommendations for the sociocultural aspects of disaster reconstruction work.

- Whether the social team is working in-house or is subcontracted, the requirements are the same. Social team members have two main functions: to work closely with their counterpart construction managers, and to work with the community as a capacity builder, facilitator, and advocate.
- For social team members, hire local people from the same regions, cultures, and language groups as those where projects will be carried out. This creates jobs for disaster survivors and ensures that local knowledge will be high from the start.
- To build understanding of the community, social team members need to figure out many aspects of the local community, and must do so in a specified amount of time to prepare for design and con-

struction. Topics needing research include the project contexts, the culture, the power structure, the status of conflict and collaboration, the dividers and connectors, the stakeholder groups, and the local capacities, strengths, and resources, as wells as local weaknesses, risks, problems, and vulnerabilities.

- Once the local power structure is known, figure out what is feasible in order to get the most representative participation from the community members and the widest sharing of power.
- Plan specific details of participation. Based on knowledge of the community and the step-by-step critical path for design and the construction technical process, ask: What needs to happen, in what order, by when? Who will participate, how, and what will they do? Who has what responsibilities? How will these steps be synchronized with the schedule for design and construction?
- From the beginning, choose ways to work that will increase the likelihood that community participation and power sharing will be sustained once the project is finished. This could mean continuing with the same form of community committee or organization; or it could mean a change to other forms where power will still be shared, where those normally excluded will be included, and where assistance will be concentrated in the places that need it most. For this to occur, ensure project exit planning to encourage follow-through by government institutions, NGOs, the committees themselves, or other entities. Include and prepare them for this role from the start.
- To get participation at the community level in each location, either partner with a suitable existing community-based group that is representative of the community, or activate a new representative group that fits in the existing legal framework. That group's main roles should be to help prevent losses for local people and to prevent and solve community-related problems that might affect construction.
- Be clear and realistic about expectations. A project's social team needs to be clear and specific when speaking with local people about expectations for their participation. The project can be demanding but within reasonable limits. An observant, analytical social team will be able to assess what are reasonable limits, keeping in mind that poor communities often underestimate their own abilities and resources. An important part of the participatory process is to have confidence in the people and instill self-confidence in them.
- Have participatory performance monitoring. Having the local people participate in their own performance monitoring gives community people a voice and raises their expectations of what should be achieved.