

LEARNING LESSONS



Photo Credit: Omar Havana / Stringer, Getty Images

Response to Nepal's Earthquake: Ten Lessons from Evaluations

On April 25, Nepal was hit by the worst catastrophe in almost a century. A 7.9-magnitude earthquake, followed by at least five major aftershocks, reduced parts of the Kathmandu Valley to rubble. More than 7,000 people are known to have died in this catastrophe, and that number could rise significantly. The news about the devastation in the rural areas is just coming in.

People are living in fear of more aftershocks and are afraid to go back into their houses for fear of lingering aftershocks and risks of damages to the structures. They are camping outside, amidst the rain and cold weather. As one person put it on social media: "I feel as if the world is falling apart right beneath me and I stand helpless not knowing whether I will see the next hour".

As Nepal faces the daunting task of relief, recovery and rehabilitation, past experiences provide some lessons on how to deal with this and future catastrophes. Disasters are highly destructive in their impact on peoples' health, livelihoods and well-being, particularly for the poor. The immediate challenge is to respond urgently to relief and rehabilitation needs, but in ways that would help improve future responses.

Each calamity is different in its characteristics, devastation and implications. But here are some quick findings of a general nature from previous work especially at the Asian Development Bank and the World Bank.

Recovery of medical facilities and schools.

Restoring power to hospitals and securing fuel are the first priority—and this is particularly the case in Nepal where it has been reported that many patients are being treated in the open because of the very vulnerable state of hospital structures. The scale of the tremor in the 2011 Great East Earthquake in Japan caused power circuits and road networks to break down, hampering the delivery of fuel, food and clean water. The hardship was severe for the elderly, people in great medical need (for example, those needing dialysis or surgery) and delivering mothers (Nepal has one of the highest maternal mortality rates). In the 2007 Pasco Peru earthquake, 97% of hospital beds were lost to an 8.0 magnitude earthquake, while in 2008 in Wenchuan, People's Republic of China, 52% of health facilities were destroyed. Viewed against these damages, it is sobering to note that the cost of adding disaster resilience to hospitals and schools (as the initial form of shelter in many countries) is only some 5% of additional cost for building new facilities.

Governance and corruption. Transparency and honesty in the use of resources is a grave concern in emergency recovery operations. The vulnerability to corruption is presumed greater in situations where large accounts of resources are made available and where urgency calls for bypassing slower processes of checks and balances. Given some nascent return to full democracy in Nepal, it will be all the important to have clear criteria to share responsibilities among the various actors above and below the local government level to assess local needs and monitor interventions.

Speed but with care in design. Quick initial actions (food, medicines, water, sanitation and shelter) and a realistic schedule were major success factors in the Mexico Earthquake Project (1986). Temporary reinforcement of dwellings for low-income strata was done within the first month. But one assessment concludes: *“There is no emergency period where anything goes. Every response is either developmental or counter-developmental; every decision affects everything else.”* Cutting corners on due diligence is costly (that is why in the hospital emergency room, protocols have to be followed). Some disaster responses, for example in Honduras or Mozambique, have focused too

heavily on rebuilding infrastructure quickly and not enough on adapting and preparing for the future (e.g. seismic resistant building codes, land use planning and early warning). It would be vital for Nepal to note the value rebuilding better.

Local participation. Disaster responses resemble military operations in their heavy reliance on command and controls. The sense of urgency when lives are at stake sometimes discourages participatory processes. In particular, the perceived need for haste makes it easy to bypass local power structures. People and institutions that might help rebuild affected communities are left out of the relief response, often because the external support agencies have limited knowledge of the communities. Leadership remains vital as key decision making needs to be swift and clear. But the value of beneficiary participation is also clear, for example in issues of livelihood restoration or relocation of residences and businesses. In Aceh-Nias, after the Asian Tsunami 2004, local communities were involved in designing the building standard of social housing in a way that respected the local culture and tradition. Participation often brings out least cost and sustainable solutions.



Socialized housing were rebuilt in an area in Banda Aceh, the capital of Indonesia's Aceh province, that was devastated by the tsunami that hit on 26 December 2004.

Temporary shelter. It pays to preserve existing social relationships and avoid permanently relocating neighborhoods. If possible, expensive temporary shelter might be avoided, as people are able to find adequate temporary shelter using materials from damaged buildings, and families that did not lose their dwellings help shelter friends and relatives—as occurred in Colombia after the

Armero eruption and in Grenada and St. Lucia after Hurricane Ivan. If people are moved out of the main cities and shelters are required, efforts need to be made to keep families and neighborhoods intact for reasons of social support and continuity.

Damage assessment and cash transfer. The general population can be helped to recover emotionally through the rebuilding process with paid work, as was done in Gujarat, India in 2001. Taking the time to ensure that usable building materials are recovered and recycled is a way to ensure that the poor will be able to afford to rebuild. Once work opportunities associated with clearing rubble and recycling materials diminish, it is important to provide cash assistance targeted at families, as in Turkey's Marmara 1999 earthquake. In the 2001 earthquake in Gujarat, \$20 million out of \$500 million of Asian Development Bank support was used for one-time, livelihood restoration. For more than 78,000 beneficiaries, the focus was on cottage and village industries, and on women. More than 31,000 tool kits were distributed to artisans and handicraft workers. After floods in Pakistan, under the President's Flood Relief directive to the Benazir Income Support Program, the national registration agency channeled conditional cash transfers. Disasters often present opportunities to enhance gender equity in the response program design. For example, in property rights, in the Maharashtra Emergency Earthquake project (World Bank), advances were made by registering reconstructed houses in the name of both husband and wife. There are known challenges related to gender issues in Nepal, and a disaster such as this would have serious impacts on women, especially through reduced nutrition and risks to their wellbeing.

Land policy and administration. After earthquakes and floods, loss of important land rights documents at both the household and administration levels can pose serious problems. Community resolution processes for land rights are likely to be needed in Nepal too. There are established and tested conflict resolution models, including parcel mapping techniques. In Aceh, Indonesia, reconstruction of land property rights under the Reconstruction of Aceh Land Administration System Project was conceived as an innovative, bottom-up process, with a high level

of community engagement. Community-Driven Adjunction processes were subsequently endorsed by neighbors and the village chief for 300,000 parcels of land. Civil records will be important to ensure the entitlement for cash transfers, new house allocation; and in extreme cases, reunite separated family members (children who were orphaned) in the long-term.

Donor coordination. Project performance is at risk when each donor tries to retain a separate role. Just basic information-sharing has proven to be an important aspect of the needed coordination. For example, in the case of the Mozambique floods of 2007/2008, coordination could have been improved if donors had been more open in sharing information including damage assessments and macroeconomic evaluations. The Aceh Indonesia tsunami of 2004 is often cited as a successful case of large logistical recovery programs. Under the government's special agency, called Rehabilitation and Reconstruction of Aceh-Nias, subproject preparation and approval adopted a simple system of basic conditions and procedures. The special agency and locally-based aid agencies offices could immediately take actions, as they had the necessary delegated power on procurement and due diligence clearance from Jakarta.



A warehouse in Banda Aceh where tsunami aid is being distributed to the devastated region. Photo credit: Jason South

Monitoring and evaluation and grievance procedure. In the case of the northern Pakistan earthquake in 2005, monitoring and evaluation was put in place to determine the degree of compliance to construction standards of destroyed houses. It sought to determine the extent of damage to houses, compliance of repair work, problems faced by the affected households (materials, payment,

labor costs, social issues), and how vulnerable groups were coping in the process. This was a joint work by the government with Asian Development Bank, Agence Française de Développement, Islamic Development Bank, and the World Bank. Monitoring and evaluation with a results focus, and in particular independent and credible monitoring, can improve confidence of beneficiaries in the government and of donors. The system will also benefit from involving nongovernment workers and civil society organizations, and sharing common platforms for nurturing trust.

Private sector. The private sector can play a key role in infrastructure and logistics, local banking, and provision of physical capacity. Already, many telecommunications companies are offering free services to and from Nepal (for example, Viber and Skype). In the aftermath of the Asian tsunami, the International Finance Corporation supported the relief efforts of an existing client in Sri Lanka with port and airport facilities, allowing for a very quick response to the disaster. In Pakistan, a private hospital mobilized medical teams and mobile treatment centers in the disaster areas.

References

Asian Development Bank. 2014. *Operational Plan for Integrated Disaster Risk Management: 2014-2020*. Manila. Available online at <http://www.adb.org/documents/operational-plan-integrated-disaster-risk-management-2014-2020>

Asian Development Bank. 2013. *Investing in Resilience: Ensuring a Disaster-Resistant Future*. Manila.

Asian Development Bank. 2010. *Rebuilding Lives and Homes in Aceh and Nias, Indonesia*. Manila.

Independent Evaluation. 2012. *Special Evaluation Study on ADB's Response to Natural Disasters and Disaster Risks*. Asian Development Bank. Manila.

ESCAP and UNISDR. 2012. *Reducing Vulnerability and Exposure to Disasters: The Asia Pacific Disaster Report*.

UNISDR, World Health Organization, and World Bank. 2008. *Hospitals Safe from Disasters*.

The World Bank Response to the Haiti Earthquake. Available online at https://ieg.worldbankgroup.org/Data/reports/eb_10_haiti.pdf.

Response to Pakistan's Floods: Evaluative Lessons and Opportunities. Available online at http://siteresources.worldbank.org/EXTDIRGEN/Resources/ieg_pakistan_note.pdf.

Zulahamsyah Imran, Addie Permono, Thomas Nugroho, Rosalina Hutagaol. 2010. *An Effort Towards Hope. ADB's Track Record and Contributions in Rebuilding: Aceh and Nias Through ETESP*. Asian Development Bank: Jakarta and Manila.

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