

# Synthesis of Lessons Learned from Earthquake Emergency Response Projects by IsDB and Other MDBs



This brief synthesis of Lessons Learned has been compiled from past IsDB-funded earthquake response and recovery projects in Pakistan and Indonesia, and similar projects financed by the World Bank and the Asian Development Bank in response to emergencies in Turkey, Nepal, Haiti, Japan, and India. The lessons span across various segments of earthquake emergency response, post-disaster recovery planning, and reconstruction of resilient infrastructure.

IsDB leverages its substantial network of development partners to contribute to the rescue phase in the response to natural disasters. Therefore, this brief synthesis focuses on lessons relevant to the Bank's potential contribution to emergency response, post-disaster recovery and reconstruction interventions.

## Earthquake Emergency Response

**1. Earthquake response and recovery projects should target populations that were well identified through a rigorous damage assessment:** For projects located in remote areas, the implementation period planned should consider logistics challenges for the project staff to travel to the communities. This avoid delays due inaccessibility during the seasons of challenging weather (snow, rains, etc.).

**2. Cash transfer assistance after earthquakes helps quick livelihood restoration:** As was the case in Turkey's 1999 earthquake in Marmara, and the 2001 earthquake in Gujarat, India, providing survivors with employment and cash transfers early on yielded better results. This is particularly helpful when work opportunities associated with clearing rubble and recycling materials diminish.

**3. Recovery of medical facilities and restoring power to hospitals are high priorities:** The power circuits and roads leading to hospitals are important because they are necessary for the delivery of fuel, food, and clean water. Otherwise, the elderly and people in great medical need are like to face severe hardship.

**4. Lengthy local procedures contribute to significant delays in implementation:** Using flexible procurement procedures for post-disaster project management can mitigate delays,

reduce transaction costs, and timely achievement of project results.

**5. Pre-arranged agreements, including public-private partnerships, can ensure financial protection of critical infrastructure:** The private sector can play a key role in infrastructure and logistics. Private sector can also provide local banking services and enable expansion of health services. Its added capacity allows quicker response to the earthquakes. For instance, private hospitals may be involved in mobilizing medical teams and in operating mobile treatment centers in the disaster areas.

**6. The land ownership issue is of critical importance in earthquake response and post-disaster recovery:** Loss of land rights documents at both household and administration levels is a common issue faced after earthquakes, which can lead to serious complications. In some earthquake situations, a dedicated taskforce for land issues may be formed. Relocating neighborhoods for reasons other than disaster vulnerability should be avoided and grievance mechanisms need to be in place from the outset.

## Post-Disaster Recovery Planning

**7. Streamlining, integrating, and coordinating from the start help expedite recovery:** Global experience shows that it is a good practice to have a single agency coordinating, and in some cases, implementing the recovery program. Recovery programs need to be cross-jurisdictional. Their success requires inter-organizational efforts involving line ministries, development partners, NGOs, communities, and private sector actors. Hence, having clear delineation of roles and responsibilities among the various actors is of utmost importance, especially for the shared ones. Coordination and engagement of all stakeholders are needed for that, including during the early steps of data collection and response.

**8. There is a need to be agile in ensuring long-term resilience in post-disaster recovery and planning:** Using remote-based damage estimations helps quickly identify key investment

needs and generate inputs for more detailed assessments. In Central Sulawesi, Indonesia, this helped swiftly piece together an overall picture of the disaster impacts and facilitated efficient resource mobilization and additional technical assistance.

**9. Inclusion of the most vulnerable victims and providing targeted socio-technical assistance is vital for their rehabilitation:** This should be pursued through tailored provision of resources to ensure the reconstruction of houses for the most vulnerable. Moreover, their inclusion in the labor force for the reconstruction works is to be followed through by providing construction skills enhancement training leading to the diversification of livelihood opportunities.

**10. In some projects which provided reconstruction and infrastructure rehabilitation, the assumption was that the economic activity will inevitably follow whereas promotion of economic activity requires consistent and recurrent investments on both supply and demand side of the market.** If the project also has livelihood support component, an integrated approach with all aspects of market creation needs to be incorporated in the project (if justified by economic and risk analysis). Relying on infrastructure development only in driving economic activity needs to be avoided.

## Investing in Resilient Infrastructure

**11. Utilizing technology helps understand the reconstruction needs of destroyed and damaged homes/facilities across the country quickly.** As part of the household registration, an Earthquake Housing Damage Characteristics survey can benefit from digitized means and leverage a network of social mobilizers. The digitization of participation agreements and the establishment of a comprehensive information management system contribute to a rapid shared understanding of needs.

**12. “Build Back Better” principles for reconstruction help ensure longer-term resilience:** In case a designated reconstruction vehicle such as a National Reconstruction Authority is formed, “Build Back Better” principles should be adopted by the authority, which shall acquire vital knowledge, experience, and lessons in post-earthquake

reconstruction. The agency shall also transfer such knowledge to concerned authorities at national and local levels to ensure resilience in reconstruction of houses and infrastructure.



**13. “Build Back Better” requires an owner-driven approach:** House owners and members may be provided with information on safe building practices and materials through an owner-driven reconstruction approach. The enforcement of safety guidelines and safer construction practices should be ensured. While designing buildings, earthquake-resilient (seismic) designs should be adopted by the executing agency at the project’s outset. Building houses with base isolation, on top of flexible pads made of steel, rubber, and lead in earthquake-prone zones is of prime importance and should be encouraged.

**14. Capacity development for local contractors is vital for ensuring resilience:** When a disaster response project is implemented in remote locations with hilly terrains and facing security issues, most contractors who participate in the bidding process are local firms with limited technical and financial capacities. Therefore, capacity development for local actors can be a sustainable investment as it would allow them to be technically capable and economically independent.

**15. Monitoring and evaluation in disaster interventions promote effectiveness:** Engaging a monitoring and evaluation consultant to closely monitor project implementation with regular and frequent site visits in earthquake cases proved to be effective and useful.

