

Lessons from the Great East Japan Earthquake

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Learning from Megadisasters, a knowledge-sharing project sponsored by the World Bank and the government of Japan, is collecting and analyzing information, data, and evaluations performed by academic and research institutions, nongovernmental organizations, government agencies, and the private sector. The project aims at sharing Japan's knowledge on disaster risk management (DRM) and postdisaster reconstruction with countries vulnerable to disasters.

In coping with the Great East Japan Earthquake (GEJE), Japan's advanced DRM system, built up during nearly 2,000 years of experience with natural risks and hazards, proved its worth. The loss of life and property could have been far greater if the country's policies and practices had been less effective. The main elements of that DRM system are: (i) Investments in structural measures (such as reinforced buildings and seawalls), cutting-edge risk assessments, early-warning systems, and hazard mapping—all supported by sophisticated technology for data collection, simulation, information, and communication, and by scenario building to assess risks and to plan responses (such as evacuations) to hazards. (ii) A culture of preparedness, where training and evacuation drills are systematically practiced at the local and community levels and in schools and workplaces. (iii) Stakeholder involvement, where the national and local government, communities, NGOs, and the private sector all know their role.

Certain improvements would have made the Japanese reaction even more effective. Three are particularly important:

- (i) Spreading a better understanding of the nature and limitations of risk assessment among local authorities and the population at large would improve collective and individual decision making, especially in emergencies. During the GEJE, communication about the unfolding disaster could and should have been more interactive among local communities, governments, and experts. Distributing hazard maps and issuing early warnings were not enough. In the event, the magnitude of the tsunami was underestimated, which may have led people to delay their evacuation, if only for a fatal few minutes.
- (ii) Coordination mechanisms on the ground should be agreed on before the event. During the GEJE, coordination among various organizations, such as governments (national, prefectural, and local), civil society, and private organizations was not optimal. Local governments, whose facilities in some cases were wiped out by the disaster, had little experience working with other organizations on a large scale, and they received insufficient support from the central government in managing the new forms of cooperation. Coordination with international relief agencies and donors offering exceptional assistance was simply not up to the unprecedented task.
- (iii) Vulnerable groups must be not only protected but also engaged. Understanding and meeting the challenges of the elderly, children, and women, both during the emergency and in its aftermath, are priorities for effective postdisaster response.