

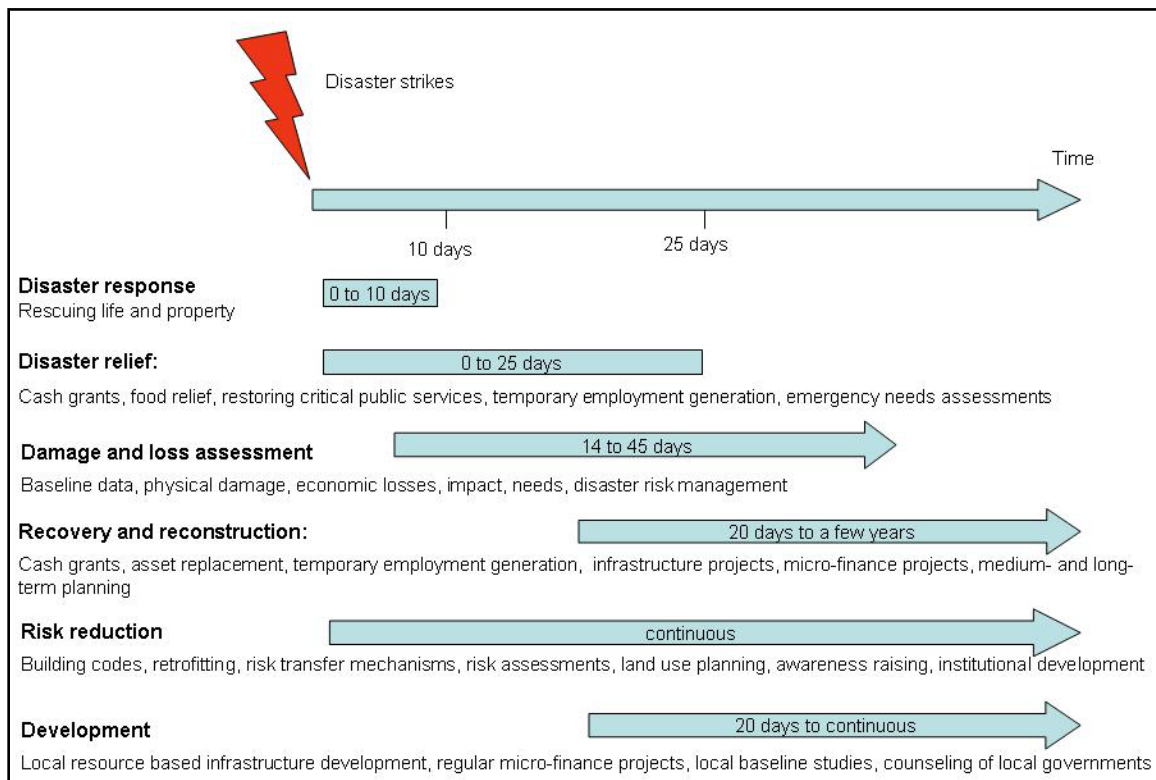
HAITI

WORLD BANK'S RESPONSE AND EXPERIENCE

In recognition that natural disaster losses can eliminate years of development, the World Bank has developed considerable capacity to support in recovery and reconstruction after these types of calamities. On Tuesday, January 19, a week after a 7.0-magnitude earthquake caused the worst catastrophe in Haiti's history, a group of Bank experts arrived on the scene. Deployed upon the Haitian Government's request, the team will work with local officials in launching an ambitious earthquake disaster recovery and reconstruction plan.

1. What will such plan entail?

Activities following an earthquake or any major disaster are recognized to occur in three major phases. All throughout such phases it is also essential to keep risk reduction in mind. Only until most of the three initial phases work is done, development efforts can start again.



- **Response (0-10 days) and Relief (0-25 days):** The situation is stabilized – rescue, immediate medical aid, food and emergency shelter are provided, dead are cared for, dangerous structures and situations are identified and isolated or controlled. During this phase planning for recovery and first considerations for reconstruction also take place.

Aside from ensuring that the population affected has access to food and basic health, a crucial decision that must be made during the early days relates to housing. If large numbers of people are displaced, a decision must be made as to *where* they will be sheltered during the recovery and reconstruction phases –on-site or off-site? That is, can resources be mobilized to provide

temporary (not emergency) shelters on the site or very close to where they previously lived, or will large “refugee camps” have to be built at some distance from where they lived?

- **Damage and loss assessment** (14 to 45 days): Also occurring during the transition from response to recovery, the damage and loss assessment helps determine the direct and indirect economic effects of the disaster. A sound understanding of such effects and the needs they’ve created provides the basis for effective recovery and reconstruction.

A damage and loss assessment has two dimensions:

Assessment of physical damage – This involves a physical survey of damages by engineers and other sector specialists. This survey can be divided into three sectors:

- **Public sector.** Consisting of public buildings, roads, dams, water supply and other facilities. Relevant engineering departments should have initial surveys accomplished within several days. There are a number of technical references available to assist these departments.
- **Private industrial sector.** Similar to the public sector, management and technical resources should be available to accomplish a survey within several days.
- **Private residential/commercial sector.** This is the most problematic sector, in that owners do not have the resources to detect or understand the significance of damage. Those responsible for these surveys are in local building departments, whose staff will need augmenting from other departments. The global standard for assessing post-earthquake damage to buildings is the “ATC-20” document, which should be translated and employed, if Haiti doesn’t have an existing standard.

Assessment of economic loss: The global standard for assessing economic damage and loss is the UN Economic Commission for Latin America and the Caribbean’s Damage and Loss Assessment (DaLa) methodology, which the World Bank employs to assess the effects of a natural disaster. DaLa measures impact on the overall economy of the affected country as well as on the household level. The methodology provides a comprehensive assessment of damage both from direct losses as well as indirect (i.e., economic loss arising from loss of function of productive assets).

A DaLa is ideally conducted two to four weeks after the disaster. During the first days after the disaster, coordination and data collection are hampered due to the complexity of the situation. If, however, too much time passes after the disaster, the damages are not visible anymore and rebuilding plans might already be underway, resulting in a missed opportunity to integrate the lessons of the DaLa. It takes two to four weeks to complete the assessment depending on the extent of the disaster.

Given the concerns with dam safety, it is recommended to initiate a comprehensive program of immediate actions, as well as mid and long term, to ensure proper assessments and rehabilitation of the dams in earthquake-affected areas.

- **Recovery and reconstruction** (20 days to a few years): the situation is returned to relatively normal activities (but not normality). The first priority is moving the population from emergency shelter (tents, shanties) to tolerable housing (this may be in refugee camps where they will remain for months to years) in which water, sanitation, nutrition and public health (including psychological) are available. Schools are also restarted.

Almost as high a priority is restoration of the economy – transportation, utilities and economic activity. Damaged roads are repaired on an emergency basis, power is restored, commercial activities assisted to resume (if need be, in tents), and factories are brought back to production.

These activities are partial in the first days or weeks, but within weeks to months, social functions (families, work, school, commerce) are all functioning (in temporary facilities, if necessary.)

Occurring in parallel during this phase is planning for reconstruction, during which the affected area is fully returned to normality. The guiding principle for reconstruction is, *don't build the next disaster*. Reconstruction has two main dimensions:

Rebuilding Function. Building new or making permanent repairs to effectively achieve the same function. For example, replacing or repairing a damaged bridge – the road can't be moved, the location is the best for a bridge-, all that's required is to construct a bridge that won't be damaged next time. The standards for the repair or replacement must be higher than before.

Rebuilding Differently. The reconstruction phase offers the unique one-time opportunity to rebuild differently. Community master plans can be made and implemented to ensure that reconstruction does not take place, for instance, on highly soft ground or near landslide hazards.

- **Disaster Risk Reduction** (continuous): The unpredictability of earthquakes combined with the importance of construction methods, makes mitigation and preparedness especially crucial for seismically active regions. While it is tempting to take advantage of the post-disaster window of opportunity to introduce institutional and regulatory reforms to promote disaster prevention and mitigation, there is a need to be realistic about what can be practically achieved in the context of an emergency recovery project. Therefore, it is essential to develop or strengthen an institutional framework for disaster risk management and mitigation.

2. What's the best strategy?

The DaLa forms the basis for a comprehensive recovery and reconstruction strategy that combines immediate, medium and long term needs. The strategy links to humanitarian assistance and merges into development planning while addressing disaster risk reduction. It takes into account the weakened administrative capacity often brought on by the disaster, while balancing the opportunities and increased support to strengthen capacity for disaster risk management in the short and longer-terms.

Experience shows that mitigating efforts after a disaster follow three main lines of intervention, each highly relevant at a particular time.

- **Basic services and social protection** to ensure a quick response to assist large groups of affected people who have lost their possessions, homes and livelihoods. Apart from the traditional humanitarian relief aid, immediate relief can be provided through instruments such as cash transfer schemes, grants in kind, start-up grants, etc. This is highly relevant during the response to recovery transition, or relief phase. Efforts to restore basic services such as health and education are also critical.
- **Infrastructure reconstruction and development** to combine repair with the creation of intermediate job opportunities through public work programs. This is highly relevant during the recovery phase. It helps the purchasing power of the affected families while reconstructing critical infrastructure at the same time. Moreover, providing survivors with income opportunities tied to physical work often seems to help as much as grief counseling.
- **Economic recovery and development** to re-establish livelihoods and reduce poverty. This type of support increases while social protection schemes are downsized and phased out. The assistance, in the form of assets and working capital, focuses on re-establishing normalcy in the productive life of families and businesses.

Three additional fields are relevant: (1) strengthening institutional capacities; (2) strengthening information and coordination mechanisms and (3) systematically building disaster risk reduction into all phases and sectors of recovery and reconstruction.

Lastly, in developing a recovery and reconstruction strategy, it is good to keep in mind that complex and deeply-rooted issues are unlikely to be resolved during recovery and reconstruction. This is well exemplified by the enforcement of building codes as well as building capacity. Both are long-standing problems that can only be tackled through incremental changes.

3. What are the Lessons Learned from past disasters?

From the experiences in assisting high risk countries recover from the impacts of earthquakes a number of important lessons have been learned.

- **Recovery Management or Governance:** Actions taken during the first weeks and months after a disaster have a major impact on the recovery process to follow, and they need to be planned and implemented accordingly. The creation of a focal point or agency for all operations enhances coordination between implementing agencies, maximizes targeting and minimizes stresses between beneficiaries and officials. There are pros and cons of different institutional arrangements for recovery and reconstruction management.

Table 1 Institutional arrangements for recovery and reconstruction management in selected disasters

Country	Type of event	Date of Event	Type of Institutional Arrangements	Implementing agencies
Indonesia (Aceh & Nias)	Tsunami and conflict	Tsunami: December 26, 2004; Peace Agreement: August 15, 2005	Decentralized Special Agency (<i>Badan Rehabilitasi dan Rekonstruksi/BRR</i>). In the first year, BRR had a centralized structure	Reconstruction agency, central government (limited), provincial and local government, donors, NGOs
Indonesia (Yogya)	Earthquake	May 27, 2006	Centralized Coordination Board (<i>Tim Teknis Nasional</i>), coordinated by Coordinating Ministry for the Economy	Provincial government, local government, donors, NGOs
Sri Lanka	Tsunami and conflict	Tsunami: December 26, 2004 Conflict: Ongoing	Centralized Special Agency (Taskforce to Rebuild the Nation/TAFREN, Reconstruction and Development Agency/RADA)	Central government, donors, NGOs
Maldives	Tsunami	December 26, 2004	Centralized Coordination Board (National Disaster Management Center/NMDC)	Central government, donors, NGOs
Colombia	Earthquake	January 25, 1999	Decentralized Special Agency (Reconstruction Fund for the Coffee Region/FOREC)	Local government and NGOs
Pakistan	Earthquake	October 5, 2005	Decentralized Special Agency (Earthquake Reconstruction and Rehabilitation Authority/ERRA)	Provincial and local government, military, partner organization (PO), donors, NGOs
Grenada	Hurricane Ivan	September 7, 2004	Centralized Special Agency (Agency for Reconstruction and Development/ARD)	Central government, donors, NGOs, and external partners
Honduras	Hurricane Mitch	Oct 25 – Nov 1, 1998	Centralized Special Agency (COPECO (Permanent Commission for Contingencies))	Central government, provincial and local government, donors, NGOs

- **Transparency:** Key for successful reconstruction, it allows all parties to track the progress of reconstruction—who is doing what and where. This is essential for coordinating an effective response, and good for public morale. As recovery and reconstruction proceeds, more extensive and detailed communication will be needed regionally and locally. An innovative approach

supported in Indonesia was the establishment of a regular newspaper that provides vital information on reconstruction. Other regions have accomplished this goal through the Internet.

- **Financing:** When a disaster occurs, the key concern for the affected country is what to do, how to do it, and, obviously, how to fund it. Funds are needed immediately and, apart from generous international relief aid, funds are typically diverted from long-term development. When the humanitarian assistance phase is completed the affected country has difficulty accessing funds for recovery interventions before longer-term reconstruction and development programs can commence. Timely provision of recovery financing that is able to bridge the gap between humanitarian relief and development is crucial to ensure accelerated recovery. There are several modes for recovery financing:
 - For the most vulnerable countries, establishing contingency funds (be it on a country, regional, or global scale) results in receiving timely and adequate financial resources.
 - Risk transfer is another option. The *Turkish Catastrophe Insurance Pool* set up after the Marmara earthquake of 1999, supported by the government of Turkey, the World Bank and the private sector reinsurance company Milli Re, is a very good example of public-private partnership in providing catastrophe risk transfer and financing facility.
 - The approach followed by the Government of Pakistan in terms of clearly distinguishing between the roles and responsibilities of different players (bilateral organizations, International Financial Institutions, civil society and implementing agencies) for relief and reconstruction helped to bridge financing gaps efficiently and effectively. It also built complementarities across projects, minimized strategic divergences, and avoided geographical and programmatic overlaps.
 - The Government of Indonesia obtained US\$7.8 billion in total from the international community and approved a national amount of US\$ 2.3 billion for a five-year rehabilitation and reconstruction program. The Government established a Multi-Donor Fund (MDF) as financing mechanisms to ensure an efficient and coordinated delivery of financial support in partnership with the international community and civil society.

4. How to Have a Successful Implementation?

Several technical aspects are key to implementing a successful recovery and reconstruction.

- **Standards and Norms:** Every opportunity needs to be taken to adopt and enforce seismically resistant building codes, both before and after actual earthquakes. Simplicity of the message is essential to the adoption of disaster-resistant technologies. In Pakistan for example simple earthquake-resistant features for non-engineered masonry construction were promoted that could be understood, adopted, and applied by the villagers.

Again, in Pakistan typical designs were developed, vetted by seismic experts, and promoted in the field. Constructed buildings were then reviewed against the designs, and typical errors were noted. Guidelines were issued that showed how to fix the typical errors identified. Promulgation of the standards is not enough – the building process has to be seen as a process, or series of links between design, local officials, builders, local artisans and owners, where the process can break down at any stage. Effective reconstruction involves creating a system of measures – education, training, enforcement, etc – that strengthens each step in the process.

- **Housing:** As mentioned earlier, decisions regarding housing are fundamental to the recovery and reconstruction process. Numerous disasters emphasize two key lessons:

People don't want to move. To the maximum extent possible, displaced persons should be returned as quickly as possible to a place as close to their residence as possible. If their

housing has been destroyed, one solution is making debris clearance a very high priority, and building core housing on site, which can be gradually upgraded over time into a permanent house. If population density or other conditions don't permit this, then temporary housing should be provided in the immediate vicinity – parks, school fields, etc. The strong reluctance to move is well founded, people have long-standing ties to the community, and live where they do for good reasons. Moving people to distant camps destroys communities, and disrupts lives for many years.

Short cut to permanent housing: Traditionally, disaster housing has had three phases – emergency (tents), transitional (refugee camps) and permanent. A key lesson from many disasters is to eliminate or minimize the transitional phase, and move people directly from emergency shelter to 'permanent' housing. Of course, complete permanent housing can't be furnished instantaneously, but providing core-housing modules (or the building materials for residents to do so) on the site of their former residence allows residents to return and move on. Over time, these core modules are extended and transition to permanent housing occurs.

- **Critical Infrastructure:** Reconstruction of public building and infrastructure should include disaster-resistant technologies. Reconstruction is a unique opportunity for upgrading critical infrastructure, and the opportunity should not be wasted.
- **Livelihood:** Often too little attention is paid to the impact of recovery operations on livelihoods. In disasters that cause significant damage to housing, taking the time to ensure that all usable building materials are recovered and recycled is one way to ensure that the poor will be able to afford to rebuild.
- **Social protection:** Mechanisms such as cash transfers are typically an intervention that is managed by the central government and executed and supervised by the local government and civil society networks. As part of government planning efforts, countries should plan responses aiming at swift, equitable and consistent deployment of support.
- **Health Services:** It is critical to ensure access to essential primary and secondary health care services, as the system is rebuilt, targeting populations with special needs, especially women and children. To improve coordination, it may be useful to mobilize health managers and health staff from other unaffected areas to work temporarily in earthquake affected areas. It is also important to take care of healthcare workers, as the psychological impact of the earthquake is likely to manifest in increased absenteeism from work, insomnia, and inaction.

The health sector will also face the additional burden of treating the new vulnerable population subgroups, including the disabled, widows, and orphans, which require specialized care and services. Significant environmental issues are likely to emerge, such as the threat of epidemics due to the accumulation of waste and garbage and the collection and disposal of debris in affected areas. This is likely to create an environment conducive to the spread of communicable and vector borne diseases, including measles, meningitis, as well as water borne diseases like typhoid, hepatitis A and cholera.

- **Community infrastructure:** Reconstruction is typically managed by local governments, civil society organizations, UN agencies and non governmental organizations with relevant experience and executed by community based organizations, or where possible, by local contractors, using local materials and local labor. Preparation and implementation of adequate policies and guidelines on engineering standards, labor standards, contracting and procurement and supervision and quality control will increase the speed of implementation without compromising quality.