



International Workshop on Post-Earthquake Reconstruction Experiences

**Organized by the United Nations in China
and the Ministry of Commerce of the People's Republic of China**

14-15 July 2008, Swissotel Beijing

WORKSHOP SYNTHESIS

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I. THE WORKSHOP: OBJECTIVES

The International Workshop on Post-Earthquake Reconstruction Experiences was jointly organized by the Ministry of Commerce and the United Nations¹ in China on 14-15 July 2008 at the Swissotel, Beijing. Twenty-two resource persons were invited from six national governments, nine UN agencies, and five non-governmental organizations with implementation experience in post-disaster recovery. The workshop was attended by approximately 200 Chinese government officials, academics, NGOs, bilateral international cooperation officials and United Nations officials.

The presentations and discussions at the workshop were rich in substance. The workshop covered a range of practical issues and lessons from past disaster response (see Workshop Agenda in Annex A). The experiences from India, Indonesia, Japan, Pakistan, the Philippines, and Sri Lanka highlighted key components of building back better.

The opening speeches by the Deputy Minister of Commerce Ms Qiu Hong and Mr. Khalid Malik, United Nations Resident Coordinator for China set the tone of the workshop:

Deputy Minister of Commerce Ms Qiu Hong thanked the United Nations and the international community for their care and support to the Government of China in the response to the Wenchuan earthquake. The earthquake of May 12, 2008 was unprecedented in terms of damage and relief. It affected 400 counties and over 46 million people. The relief operations of the Government of China received the attention of the highest national authorities. Humanitarian assistance was received from the United Nations, international and private donors. The relief operation, the biggest in China's history, focused on saving people's lives.

The response is entering into a new phase of rebuilding and reconstruction. Policies and guidelines have been issued, and the focus is now on implementing the guidelines. Line ministries and local governments are assessing damage and environmental impact. The planning process, though urgent, requires meticulous attention.

The recovery and reconstruction will place emphasis on assisting the people, protecting the environment, improving basic living conditions and public facilities, adjusting town plans for a harmonious coexistence with nature, public and rural housing, economic development, disaster risk reduction, safety, and cultural heritage.

The Government of China and the Chinese people are resolute for a successful reconstruction.

United Nations Resident Coordinator Khalid Malik acknowledged the scale of the damage and its unprecedented nature, and referred to the remarks of the UN Secretary-General Ban Ki Moon: "The Chinese Government mounted a remarkable rescue and recovery effort that stands as an example of how united efforts can address extraordinary situations." In a very short time, the social order in the earthquake affected areas has been restored. This is a great practice to be shared with the international community.

The Wenchuan earthquake has also received an outpouring of support from the international community. In particular, the contributions from the private sector have been unprecedented. The United Nations stands as a key partner of the Government of China in the earthquake response. The UN is already delivering support through the Consolidated Emergency Response Fund (CERF) and on July 16, 2008, the UN China Appeal for Early Recovery Support, which was prepared with the Government of China, will be launched.

This is a practical workshop to share what experiences can be avoided what lessons can be followed. Workshops of this nature have been organized before in Indonesia in the post-tsunami context and in

¹ Financial and technical contributions were also received from OCHA, UNA Regional Offices and HQ

South Asia in the post-earthquake context. This workshop, based on a request from the Government of China, will contribute to the current recovery and reconstruction planning process.

International experiences have shown that successful recovery and reconstruction needs to incorporate speed and expediency, community involvement, coordination, and the contributions of all. The UN stands ready to play an active and supportive role to the Government of China.

The workshop discussion was summarized in the closing speeches by the Director of the ILO Office for China and Mongolia, Ms Constance Thomas, speaking on behalf of the UN China, and Director General of International Cooperation, Ministry of Commerce, Mr Zhang Kening. Mr Kening expressed the Government of China's commitment to build the best back in Sichuan. Both thanked the participants and their organizations for their valuable contributions to the workshop.

II. THE REPORT

This report presents a synthesis of the presentations and discussions at the workshop. The remainder of the report is divided into six sections for readers' easy reference.

Section I: Principles of Disaster Recovery and Common Lessons Learned

Section II: Reconstruction Structure and Management System

Section II: Planning

Section IV: Implementation

Section V: Sectors

Section VI: Monitoring and Documentation

Each section draws information from the presentations and discussions made at the workshop. Copies of the presentations in both Chinese and English can be downloaded from <http://www.un.org.cn/cms/p/resources/30/685/content.html>. At the end of each session selected website resources are listed for more information.

SECTION I: PRINCIPLES IN DISASTER RECOVERY AND COMMON LESSONS LEARNED

Since 1989, the International Community has placed disaster reduction on the global agenda. Much has been learned, and disaster responses have become more effective each time. The International Strategy for Disaster Reduction and the Hyogo Framework of Action provide for guidance on relief, recovery and reconstruction that have been put into practice in the past few years.

Major natural disasters create a situation requiring an extraordinary effort on the part of governments and partners to provide humanitarian assistance and reconstruct the affected community. Past disaster responses in Asia and worldwide have highlighted some fundamental practical arrangements that need to be in place to facilitate sustainable reconstruction:

1. Inter-relationship between different phases of response: Relief, Recovery, and Reconstruction

The continuity of services and support to communities and individuals affected by natural disasters is the most critical component in successful recovery and reconstruction. Action after natural disasters can be divided into three phases:

- **Emergency and Response Phase** requires humanitarian programmes and lasts for about 60 days after the disaster strikes
- **Recovery and Reconstruction Phase** aims at rehabilitating infrastructure and livelihoods and restoring social and economic order for the short-term and medium-term.
- **Preparedness and Risk Mitigation Phase** is part of a development process.

Lessons learned from international experiences are:

- A. **The emergency/relief phase** should be as short as possible and its official closure declared. A special unit should be set up to manage secondary disasters.
- B. **Reconstruction dilemmas include:**
 - a. The relative trade-off of seeking to rebuilding more quickly against allowing for more deliberate involvement of popular participation, dialogue and debate on the features of rebuilding.
 - b. Emphasis given to satisfying short-term basic reconstruction needs or rather to focus on addressing long-term needs that may provide a better measure of risk reduction.
 - c. Donor-driven approaches where contractors rebuild a community may be more efficient than user-driven options, but they make a minimal contribution to the social and economic development of communities.
- C. A gap between the relief and reconstruction phases occurs as funding for relief activities has been exhausted and reconstruction planning and resource mobilization take time. Further, livelihoods and capacity building are often unattended and under-resourced. This has left communities and the vulnerable groups unprepared to participate in reconstruction and unready for next disasters.
- D. An early recovery phase is necessary and helpful to bridge relief and reconstruction as well as enhance sustainability and impact of reconstruction investments. Recovery refers to:
 - a. Decisions and actions taken after a disaster with a view to restoring or improving the pre-disaster living conditions of the stricken community, while encouraging and facilitating necessary adjustments to reduce disaster risk.
 - b. Recovery (rehabilitation and reconstruction) affords an opportunity to develop and apply disaster risk reduction measures.

- E. A local level early recovery programme targeted specifically on livelihoods issues has been effective in addressing employment needs, community's capacity and organizations, and overall service delivery to disadvantaged communities.
- F. The recovery phase helps enhance local government and local services delivery network to re-establish and develop necessary operational mechanisms as well as strengthening and replenishing its capacity for rehabilitation.

2. Capacity building:

Disaster-response, particularly in the relief and recovery stage, is a demanding task. And as shown in the experiences of all the countries presented at the workshop, building back better requires a new way of thinking from a multidisciplinary approach. Policy coherence and operational capacity go hand in hand. Hence a broad-based training programme on technical issues and implementation arrangements targeted at different segments of the operation is necessary. Experiences in India, Pakistan and Sri Lanka emphasized the need to train government departments to work in partnership with one another and with the affected communities. The experiences from Indonesia showed that capacity building is not just about training. It entailed developing management arrangements to ensure implementation agencies had the resources and authority to carry out their work as the situation evolved. A capacity assessment gives inputs into key areas that need urgent strengthening within the context of each disaster.

A successful reconstruction in the past demonstrates that local governments will need to have enhanced capacity in terms of:

- A. Having sufficient staff to meet the intensity of the workload
- B. Authority to make adjustments to the programme and budget and coordinate work with relevant governmental and non-governmental organizations
- C. Administrative and financial procedures that are sensitive to the working environment in the affected areas
- D. Local government officials' knowledge and understanding about the policies, programme, and working procedures with regards to recovery and reconstruction
- E. Local government officials' competencies and skills to work with affected communities and individuals, address cross-cutting issues, i.e., gender, environment, and risk reduction, and to monitor progress of their work in terms of technical quality and social impact. In addition, with respect to the officials' personal loss, attending to their personal needs for psychosocial counselling and building their skills to work effectively with the communities is advisable.
- F. Provision of sufficient budget for capacity building programme

A capacity building programme that maintains gender and social equity as its core pre-requisite for all staff at all levels has shown to effectively address the needs of the vulnerable population. Such a programme has the following components:

- A. Gender concerns are integrated into all training programmes;
- B. Structures for feedback from community women and young people are in place;
- C. Recognition of local knowledge and skills for disaster response; and
- D. Adaptation of the approach to the various needs of different groups of vulnerable people

In turn, women and other vulnerable groups can be empowered through working alongside or with local governments when resources and priority are given to:

- A. Efforts to form separate groups for women and girls and other specific vulnerable groups
- B. Women, in particular, and other vulnerable people, when situations permit, are included in key positions in community management bodies
- C. Social audits and mapping are carried out through women's and youth groups.

3. Community participation:

Disasters have profound affect at the community level. Community members, men and women, have knowledge about their communities, issues facing the communities and locally available resources. While there is recognition of the community's critical role in disaster response, there has been limited capacity within governments to work with the communities. As a result, communities were bypassed during the planning stages. This in turn made implementation of certain reconstruction programmes, such as relocation, difficult. Lessons learned from international experiences advise the following:

- A. Community participation in all stages of recovery and reconstruction is mandatory
- B. Staff of local governments and organizations are supported and trained in community participatory approaches
- C. Community-level committees provide a platform for communication and decision making. Equal representation of men and women as well as other social groups in the committee composition is necessary to safeguard social exclusion of the vulnerable.
- D. Policies, administration procedures, regulations and programmes should be disseminated widely for public awareness and understanding. They should be presented in simple language and accompanied by a capacity building programme.
- E. Non-governmental organizations are essential partners in community-level works in many post-disaster recovery and reconstruction. They can undertake community capacity building, skills training, and the monitoring of activities.
- F. To ensure that community participation happens and is effectively carried out with sufficient resources and capacity, community's roles and resources will need to be, if not legislated, reflected in recovery and reconstruction plan.

4. Coordination

Coordination within and between different organizations has proven to be a critical challenge in post-disaster relief, recovery and reconstruction. There is an abundance of assistance, but there is no framework and common understanding among different organizations with regards to what should be done, with whom, how and when,

Coordination will need to be multi-dimensional and multi-disciplinary to handle the complexities of recovery and reconstruction. Coordination efforts should seek to facilitate collaboration, sharing of expertise and information, and participation of different stakeholders. The tsunami-response programme in Indonesia outlines the following areas of coordination:

- A. Policy dialogue
- B. Project financing
- C. Project approval
- D. Progress recording and monitoring
- E. Review and removal of regulatory obstacles on logistics, visa and custom clearance
- F. Accelerating project implementation
- G. Assessment, review, and document good practices and lessons learned

5. Mainstreaming of Gender, Environment, and Risk Reduction

Integrating gender, environment, and risk reduction into recovery and reconstruction programmes not only supports building back better but also minimizes implementation challenges.

A. Gender:²

Research in post-disaster responses has shown that women's specific post-disaster needs and responsibilities are often not recognized. Women, because of the prevailing cultural norms, are deprived of certain key life skills, access to the community decision-making process, and

² Kiran Bhatia, Regional Gender Advisor, UNFPA, <http://www.un.org.cn/public/resource/87570a14f6f875b2d57e974d2a764cfc.pdf>

sustainable employment opportunities. As a result of the disaster, many may be exposed to sexual and physical harassment and prone to exploitation. They have to devote more time to care for the elderly and the injured in their family while also having to take responsibilities in restoring family life. Because of such a heavy workload, women tend to be excluded from the recovery and reconstruction process and are not able to contribute to the planning and implementation processes that contribute to programme success and sustainability.

International good practices and lessons learned show that mainstreaming of gender into recovery and reconstruction programme can be effective when the following arrangements are met:

- A. Women's participation in decision making at all levels of recovery and reconstruction is legislated or mandatory;
- B. Sufficient resources are allocated for gender-related activities
- C. All staff are trained to be able to undertake gender-related activities in their work.
- D. Data is sex segregated.
- E. Gender analysis, which takes account of women's multiple roles and responsibilities, is undertaken in programme design, monitoring and evaluation.
- F. Special programmes are implemented to address women's specific needs to enable them to participate in recovery and reconstruction meaningfully.
- G. Recognition and identification of men's specific needs are identified as well as provision of services as needed.

B. Environment:

Natural hazards such as earthquakes are natural phenomenon that happens without any early warning. Disasters occur when communities are exposed to natural hazardous events and are unable to absorb or recover from their impact. Post-disaster recovery and reconstruction presents a very important opportunity to strengthen communities' ability to withstand the next disaster. Mainstreaming environmental concerns into recovery and reconstruction is a key component of a pro-active disaster risk management.

The linkages between environmental issues and disasters are two fold. On the one hand, environmental issues have implications for the nature of the disaster and the subsequent humanitarian aid. On the other hand, both the disaster and the humanitarian response can have primary impact on the natural resources and receptors and a secondary impact on human health and livelihoods.³

The integration of environmental concerns in relief, recovery and reconstruction has demonstrated key benefits as follows:

- Sustainable solutions are achievable when use of environmental resources such as wood and sand for construction and water for drinking are decided based on careful identification, assessment and management
- Negative impact of relief, recovery and reconstruction activities on the environment is mitigated. Early assessment of the risks and impacts can ensure that appropriate mitigation strategies are identified and implemented.
- Long-term cost reduction in disaster responses is feasible as an environment-sensitive recovery and reconstruction approach can reduce the likelihood of protracted negative effects by linking recovery and reconstruction to the development process.

Past experiences in mainstreaming environmental concerns into recovery and reconstruction emphasize the importance of environmental impact appraisals and multi-hazard assessments at

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http://www.humanitarianreform.org/humanitarianreform/Portals/1/cluster%20approach%20page/clusters%20pages/Environment/ERM_%20Final%20Report_08%2011%2007.pdf

the planning and implementation stages. It is important to note that the environment and the ecosystem may suffer long-term damages after the disaster. Some changes are permanent and irreversible. Ecological restoration might take a long time beyond the reconstruction time horizon. The findings help guide decision makers and prevent implementation delays caused by a re-planning process.

Past experiences show that effective environment mainstreaming is achievable when the efforts are supported by:

- environmental policy statements within recovery and reconstruction plans and implementation guidelines
- awareness and understanding about environmental issues among the recovery and reconstruction policy makers, managers, implementation staff, and affected community
- technical capacity of recovery and reconstruction personnel to assess environmental issues and identify mitigation strategies
- partnership among recovery and reconstruction agencies to ensure that the environment, as a cross-cutting theme, is discussed, resourced, implemented, monitored, and evaluated
- accountability of recovery and reconstruction agencies to fulfil their respective environmental responsibilities and mandated
- environmental performance indicators and monitoring and evaluation frameworks

C. Disaster risk reduction:

Evidence has shown that damages caused by natural events such as large scale earthquakes are not the result of the earthquake per se, but of the structural defects in building and houses and social and economic system. Post-disaster recovery and reconstruction present an opportunity for corrective measures that will allow buildings to withstand next powerful earthquakes and give resilience to communities.

The Hyogo Framework of Action (2001-2015) defines disaster risk reduction as an integral component of sustainable development, with the goal of reducing human, social, economic and environmental losses due to natural hazards and related technological and environmental disasters. It advocates an integration of disaster risk reduction into sustainable development policies and planning, but also systematic incorporation of risk reduction approaches into the implementation of emergency preparedness, response and recovery programmes. In both contexts, strengthening institutions, mechanisms, and capacity to build resilience to hazards are critical elements for building back better.

Mainstreaming disaster risk reduction into all levels of recovery and reconstruction activities means:

- strengthening institutions, mechanisms, and capacity to integrate disaster risk reduction practices into recovery and reconstruction;
- creating a coordination framework which clarifies who does what, when, and how;
- formulating policies and programmes based on a thorough understanding about the damage, the causes of the damage, and the needs and capacity of institutions and individuals; and
- implementing strategies and activities that promote an understanding at all levels about the various causes of post-disaster damage, introducing interventions that address those causes, and changing behaviours and practices of organizations and individuals that have long condoned such risks.

6. Two-way communication

Disaster responses are situated between multiple complex realities. Communities and people directly affected by the disaster have the real need to reestablish their lives as soon as possible and to have all their needs met. Implementing agencies are accountable to rules and regulations in their work while having to ensure that the priorities and targets set in the recovery and reconstruction plans are met effectively and efficiently. Past disaster responses were often affected by a lack of common understanding about recovery and reconstruction policies, programmes, challenges, and procedures – both within the organizations and among different organizations. This has resulted in chaos, delays, confusions, partial implementation, overlapping of resources and efforts.

A multidimensional flow of information at all levels between the planning and the implementing bodies and among different sectors is crucial. It facilitates conformity and common understanding about goals and priorities. Progress on the ground often moved at a fast pace. New challenges that could not be anticipated at the time of planning often emerge. Hence, a regular participatory review and evaluation of the operations, involving multiple stakeholders, was universally adopted in all post-disaster responses so that necessary adjustments were made at the right level of decision-making.

Structured communications channels and formalized multi-stakeholder partnerships have shown to be effective arrangements in recovery and reconstruction. Regular review meetings, public forums, joint reports are examples of communications platforms that foster common understanding about operational challenges and progress.

7. Selected website references:

Organization	Website
IUCN (for list of endangered species)	http://www.iucnredlist.org/search/search-basic
UNEP	http://postconflict.unep.ch/
UN ISDR	http://www.unisdr.org
UN OCHA	http://www.un.org/issues/m-humani.html
UN China	http://www.un.org.cn/cms/p/resources/30/685/content.html

SECTION II: RECONSTRUCTION STRUCTURE AND MANAGEMENT SYSTEM

International experiences in previous post-disaster responses have demonstrated that building back better requires a clearly defined organization of recovery and reconstruction that facilitates and supports multi-dimensional and multidisciplinary communication, coordination, and partnerships, while upholding principles of integrity and accountability. Having a decision making body in close proximity to the disaster-affected areas can cultivate a clear understanding about “what needs to be done,” “how to do it,” and “what to adjust” as the context of recovery and reconstruction evolve.

1. National structures and management system:

Lessons Learned:

“A dynamic organizational structure with central policy planning and a decentralized implementation mechanism to ensure equitable and flexible policies and involvement of all stakeholders in policy planning and critical decision making to ensure ownership by all made implementation easy.”

Post-earthquake or post-tsunami recovery and reconstruction in Japan, Pakistan, India, Indonesia, and Sri Lanka were major undertakings and received financial and technical support from the national governments, the international community and the private sector. The initial absence of a coordination framework resulted in chaos and overlapping efforts. Each country later defined and refined a recovery and reconstruction structure appropriate to the country’s context to manage, coordinate, implement and monitor progress. In each case, a decision was made with regards to utilizing existing structures to manage disaster response or establishing ad hoc machineries.

Ad hoc national machineries:

- **India:**⁴ A state-level advisory committee was set up, comprising members from government, academic/management institutions, NGOs and industry to advise and assist in policy formulation. A public-private partnership and owner-driven approach was adopted in implementation. Work was mostly carried out by non-governmental actors.
- **Indonesia:**⁵ The Bureau for Recovery and Reconstruction (BRR) was established and mandated by a new and specific law to implement recovery and reconstruction projects financed by the Government of Indonesia and to coordinate projects financed by donors, NGOs, and other organizations. The organization is decreed by the Presidential Decree 34/2005 on Organization, which stipulates that BRR reports to the President of Indonesia and is managed by the Advisory Board, Executing Agency, and Supervisory Board.
- **Pakistan:**⁶ The Earthquake Recovery and Reconstruction Authority (ERRA) has the authority to plan, approve, monitor and evaluate, coordinate, and facilitate recovery and reconstruction. It was supported by two provincial steering committees, which oversaw project formulation by line agencies at the district levels. As works were outsourced to non-governmental sectors, local governments assumed monitoring responsibilities.

⁴ Dr P.K. Mishra, Secretary to the Government of India, Department of Agriculture and Cooperation, Ministry of Agriculture, <http://www.un.org.cn/public/resource/d848821f04ab0313c0ac1ac590bc39dd.pdf>

⁵ Said Faisal, Deputy Director on Economy and Business, BRR, <http://www.un.org.cn/public/resource/00266479f1cea35f2b96a8e0ce0c508d.pdf>

⁶ Lt. General Nadeem Ahmed, Former Deputy Chairman, Earthquake Reconstruction and Rehabilitation Authority, Government of Pakistan, <http://www.un.org.cn/public/resource/222d9e9622ae488be2f46c6e8080cc1c.pdf>

- **Japan:**⁷ The Hanshin-Awaji Restoration Committee, consisting of 7 members from governmental and non-government agencies, was created with a mandate to advise reconstruction initiatives to the Great Hanshin-Awaji Restoration Committee Headquarters, which was located in the Kobe Province. It acted as a policy advisory body to the Prime Minister and was responsible for research and policy formulation for recovery and reconstruction programmes. The reconstruction initiatives were implemented by the Hyogo Prefecture Hanshin-Awaji Earthquake Reconstruction Committee.
- **Sri Lanka:**⁸ The Task Force for Rebuilding the Nation (TAFREN) was operational in 2005-2007 with a mandate on rehabilitation. A people's process was utilized for planning, implementation, monitoring and evaluation. Village- and district-level committees were a critical element of the process as they educated, mobilized and established consensus within the affected communities and engaged the communities to address implementation difficulties as they arose.
- Other models:⁹
 - Worked within existing governmental structures: Mozambique floods in 2000 and 2001
 - Formed a new recovery task force or special commission: Mexico City earthquake in 1985, Baguio earthquake in 1989 and volcanic eruption of Mount Pinatubo in the Philippines
 - A new recovery organization created and evolved into a permanent body: Colombia (Popayan earthquake in 1983)

There are variations in the functions and responsibilities of these management structures, but they all have the common function to define priorities and the focus of the rehabilitation and manage the recovery and rehabilitation budget.

Mainstreaming of cross-cutting issues into the recovery and reconstruction structure: An Example

Indonesia: The BRR's organization was established by Presidential Decree no. 76/2006. BRR has the status of a ministry and reports to the President. The Provincial Governor of Aceh is appointed Vice Director. Within BRR structure there are 8 departments:

- Finance and planning
- Operations
- Religion and culture
- Economy and business
- Housing and settlement
- Education, Health, and Women's Empowerment
- Infrastructure, Environment, and Maintenance
- Institution and Human Resources Development

The tsunami-affected areas are divided up into 6 regions and work in each region is managed by a Head of Region.

⁷ Tomio Saito, Vice Governor, Hyogo Prefecture Government
<http://www.un.org.cn/public/resource/98d34b5cb94ac7580558187b2712fdaa.pdf>

⁸ U.W.L Chandradasa, Director of Technology and Mitigation, Disaster Management Center, Ministry of Disaster Management and Human Rights,
<http://www.un.org.cn/public/resource/c3b0a5f70ca6fd141a61666a7408bfbe.pdf>

⁹ Salvano Briceno, Director, UN IDSR,
<http://www.un.org.cn/public/resource/0734b3f8b5627a6a0982f039afd53e68.pdf>

2. Roles and responsibilities:

Lessons learned

“Multi-sourced reconstruction efforts by donors, sponsors, and the government with centralized design approvals and monitoring but decentralized implementation helped meet time lines. It is important to know which implementing partners can focus on what.”

A. Government:

The roles of the government vary in each response operation, depending on the management structure. In general, the government decides on the priorities and the focus of recovery and reconstruction. The allocation of resources, regardless of the source of funding, is under the control of the government. Some governments have an implementation function and others facilitate and monitor recovery implementation. Formalized partnerships, participation of the vulnerable population and their communities in all aspects of recovery and reconstruction, coordination mechanisms, and inter-agency communication platforms are useful.

Division of roles and responsibilities between national and provincial governments depend on the contexts of recovery and reconstruction and national administration systems. But provincial governments' ownership of the recovery and reconstruction process is critical to sustainability. However, the provincial governments, also affected by natural disasters in many ways, need to be rehabilitated. Lost assets have to be replaced and new staff have to be recruited and trained. This process takes time.

The transfer of authority and responsibility from national to provincial governments to undertake recovery and reconstruction depends on the complexity of the disaster's impact. The when and what to be transferred will have to be decided and well planned, taking into consideration the minimum capacity of local governments to undertake the work.

International experiences show some limitations governments faced in implementing recovery and reconstruction:

- Disasters place immense demands on government officials, and the public, especially those affected, have very high expectations of their leaders and public officials.
- It may be necessary to lower such expectations after a disaster if one considers the possible problems facing depleted local governments.
- In disaster risk reduction efforts, it is necessary to anticipate the implications of diminished governmental capabilities at the time of a disaster.
- Knowledge about the capacity, and identification and preparedness or readiness of key technical or specialist groups.
- The normal work done by regular officials is a vital component of disaster recovery and cannot receive less priority than the work related to recovery and reconstruction.

Governments have helped to ensure that specific needs of men and women, ethnic minority groups and of the education are addressed by taking the following action:

- Rate support of women and youth in relief efforts an urgent priority and not a secondary concern in policy, programming, and budget.
- Equip disaster and recovery management teams with appropriate tools for rapid gender and vulnerability assessments by:
 - Including reflections on attitudes, behaviors and beliefs on gender division of labour, gender relations and value of women and youth contribution to recovery;

- Ensuring that all data must be disaggregated by sex, age, ethnicity and location; and
- Developing recovery and reconstruction plans after identifying emerging needs by location for men, women, young people and elderly based on assessments.

B. Non-governmental and grassroots organizations:

The experiences of India and Pakistan demonstrated prominent roles for non-governmental organizations/civil society organizations in supporting the government in implementation. They assisted in community outreach activities, implemented capacity building programmes for community members and committees, and monitored and reported progress and difficulties in the recovery and rehabilitation. Their experiences in working with vulnerable groups were valuable to support and empower women and other vulnerable groups in recovery processes.

In Japan, the recovery and reconstruction gave birth to groups of volunteers willing and able to partake in recovery and reconstruction efforts.

In India and Sri Lanka, existing community groups and/or committees were created or strengthened to participate in organizing works at the community level. Creation of a grassroots committee with equal participation of women and men will help bridge communities and government. The committees have important functions:

- information dissemination.
- monitoring house construction activities as women see the problems of the houses from different perspectives of the engineers
- better local governance for citizens to realize their roles and duties, and communication with governments for appropriate action

The experiences from Pakistan show that the affected communities would have to be functionally viable before they could be actively engaged in recovery and reconstruction.

C. International organizations:

International organizations, including the United Nations agencies, contributed international experience along with technical and direct assistance in disaster response to each country's recovery and reconstruction. In line with the global disaster risk reduction agenda, good practices and lessons learned from each operation were collected and shared so as to assist countries from repeating previous mistakes. As needed, international organizations supported the governments in planning, implementation, monitoring and evaluation.

The donor community also contributed in terms of financial and technical resources to the recovery and reconstruction. The contribution was made either directly through bilateral channels or indirectly through the UN agencies, international and national non-governmental agencies, or other types of organizations.

3. Financial management:

Lessons Learned

Speed, flexibility and accountability had to guide the set up on the financial management system. Financial and administration regulations and procedures should be adjusted at the beginning of the operation to ensure applicability.

Financial resources for recovery and reconstruction for post-disaster responses come from multiple sources, e.g., national government budgets, overseas loans, grants from bilateral donors, and the private sector. Most countries used regular national budget arrangements and multi donor trust fund modalities. Japan set up the Restoration Capital Fund at the onset to cover the overall expenditures.¹⁰

The financial management framework of Indonesia's post-tsunami recovery and reconstruction aims to strike a balance between swift action and accountability. This was achieved by creating a regulatory framework that supports the dynamics of post-disaster operations and thus enables BRR to respond with¹¹

- Speed – broad planning process, quick procurement process, and adequate quality for swift implementation
- Flexibility – an ability of BRR as implementing agency to change budget purpose, and have fast-track funding in response to changing needs on the ground
- Accountability – the highest accountability standards, but based on a disaster context

Accountability is assured through:

- **Financial reports** – monthly, quarterly and annually, consisting of a disbursement report, balance sheet, computer data archive, and notes to the reports
- **Report on the state assets** – monthly, quarterly, and annually, consisting of reports on state assets, asset conditions, and computer report on asset inventory
- **Performance report** – on achievement of programme and project outputs, outcomes and benefits against the performance indicators

While financial audits are common in all operations, Indonesia and Sri Lanka give two different models of anti-corruption measures to cultivate public trust and confidence:

Indonesia: The BRR has within its organization an independent, autonomous anti-corruption unit with the following functions:

Prevention:

- Improve people's knowledge and understanding on collusion, corruption, nepotism; and the Integrity Pact
- Strengthen understanding of BRR staff and adherence towards prevailing law and regulation in BRR projects

Education:

- Conduct study on procedures/regulations to address potential weaknesses in the integrity of these systems and procedures
- Monitor corruption symptoms in procurement process based on complaint handling management

¹⁰Tomio Saito, Vice Governor, Hyogo Prefecture Government
<http://www.un.org.cn/public/resource/98d34b5cb94ac7580558187b2712fdaa.pdf>

¹¹ Said Faisal, Deputy Director on Economy and Business, BRR,
<http://www.un.org.cn/public/resource/00266479f1cea35f2b96a8e0ce0c508d.pdf>

- Monitor procurement process in each Department in BRR to anticipate procedural wrongdoing

Investigation:

- Conduct in-depth research on collusion, corruption, and nepotism and Integrity Pact implementation. Submit potential cases to agencies like KPK
- Conduct investigative audit on cases that indicate potential corruption
- Conduct comprehensive audit (planning, implementation, output, and outcome), performance audit, and special audit

Sri Lanka: District Complaint Mechanism Unit¹²

The District Complaint Mechanism unit was established as an independent body under the Human Rights Commission of Sri Lanka. It used the facilities of the Legal Aid Commission (LAC) and Human Rights Commission (HRC) in the District. The District Complaint Mechanism Unit is established where the offices of the LAC and HRC were not available.

It had the following responsibilities and functions:

- To assist the Internally Displaced People Project to monitor government services provided to Tsunami victims especially in terms of relief, benefits, land title and support to livelihood from the perspective of human rights.
- To make policy prescriptions to the government on a regular basis on human rights protection in the relief and reconstruction process
- To work out a code of conduct for state officials with regard to relief and reconstruction.
- To work with the IDP project towards ensuring the basic needs and social and economic rights of Tsunami victims (sanitation, food, water, housing, health and education). Special concern will be given to the needs of women and children
- To liaise with government task forces and officials on a regular basis with regard to human rights protection in the relief and rehabilitation programmes and to lobby for a more inclusive process involving all groups in decision making
- To consult and liaise with NGOs with regard to human rights issues in the relief and reconstruction process
- To consult and liaise with local level government officials regarding human rights especially at the district level
- To work with the Inquiries and Investigation Division of the Human Rights Commission in monitoring human rights violations and rule of law violations experienced by tsunami victims.

4. Selected website references:

Country/Organization	Website
Pakistan	http://www.erra.gov.pk
Japan	The Great Hanshin-Awaji Earthquake Restoration Statistics and Progress (1 January 2008) http://www.city.kobe.jp/cityoffice/06/013/report/january.2008.pdf

¹² U.W.L Chandradasa, Director of Technology and Mitigation, Disaster Management Center, Ministry of Disaster Management and Human Rights,
<http://www.un.org.cn/public/resource/c3b0a5f70ca6fd141a61666a7408bfbe.pdf>

	The Great Hanshin-Awaji Earthquake Research Institute http://www.hanshin-awaji.or.jp/hanshin_awaji/english/index.html
India	World Institute for Risk Disaster Management: http://www.drmonline.net/drmlibrary/gujarat.htm
Indonesia	http://www.e-aceh-nias.org/home/default.aspx?language=EN
UN ISDR	www.unisdr.org
UN China	http://www.un.org.cn/cms/p/resources/30/685/content.html

SECTION III: PLANNING

Lessons learned

“70% of the houses had to be rebuilt as they were built to different standards. Because of the absence of the multi-hazard assessments at the planning stage, a replanning was necessary. This could have been avoided.”

“How to assess the damage? This is fundamental. Thousands of teams with engineers, revenue officers, teachers and local NGOs carried out the assessment. But many resurveys had to be done as the criteria that were used were not effective.”

“Vulnerability and poverty are not the same thing. Vulnerability relates to disempowerment. The reconstruction process should empower people in all levels of reconstruction.”

“Accountability – reconstruction demands upward accountability (to donors). But experiences show that reconstruction has not been effective to demonstrate forward accountability (to affected victims). Reconstruction has to be accountable to the needs of the victims.”

International experience illustrates the value of multi-stakeholder and participatory assessment arrangements in support of the formulation of evidence-based recovery and reconstruction plans. Various types of assessments were conducted in order to ensure the recovery and reconstruction plans were comprehensive and took account of the various issues underpinning the complexity in rebuilding communities. Existing government mechanisms were adopted and amended as necessary in the planning arrangements. Four key assessments were highlighted and recommended for use in the master planning process. This section presents details of these assessments. Technical assessments were also done for work in different sectors and they are discussed in the relevant sections in this report.

1. Assessments

A. Damage assessments:

Sustainable recovery and reconstruction plans and implementation approaches in these disaster responses were guided by certain knowledge about the damage, both tangible and intangible. The resulting damage estimations gave a basis for the projection of financial needs for rebuilding and defining priorities and focus. As such, accurate damage assessments and a comprehensive plan of action in terms of minimum financial needs, necessary capacity, and priorities correlate to a high degree.

In Indonesia, the tsunami caused damage to a long strip of coastal shorelines (up to six kilometres inland) and a few islands. Infrastructure and road networks were destroyed, isolating communities from economic and social centres, and fishing communities and businesses in Banda Aceh were paralyzed. The damage assessments were carried out by various organizations and from different disciplinary purviews. It was estimated that sustainable recovery and reconstruction over a span of three years would need USD 7.3 billion to support programmatic priorities in infrastructure, housing, basic services, economic development and livelihoods, as well as logistics in the delivery of aid.

The Pakistan, India and Japan experiences further illustrated the value of a comprehensive damage assessment in formulating objective criteria for the distribution of recovery assistance to individuals, families and communities – who should receive what, for how much and how long, and in what manner. However, experiences show that the criteria for damage assessment had to be carefully thought out and well understood by all parties concerned in order to

minimize the need for re-assessment. In India and Pakistan, legislation on damage assessment was enacted. The assessment had to be carried out before debris removal in order to understand the various structural causes that made buildings and houses vulnerable to earthquakes. Photographic documentation was used and filed for reference in the determination of assessment packages to each affected individual/household. While the assessment findings were used in determining compensation packages for individual victims, the assessment generated valuable knowledge for the “build back better” efforts, during which past wrongs could be corrected.

In these countries, participatory damage assessments with communities have significantly created better understanding about norms, beliefs and practices in the community that magnify the impact of natural disasters. But effective, objective criteria for damage assessment needed to be understood by everyone and applied in a non-discriminatory manner. In many instances, the assessment had to be undertaken anew as the findings were not acceptable and the criteria had to be redefined.

B. Risk assessments:

Recovery and reconstruction present a rare opportunity to redevelop urban areas so that infrastructure and facilities serve present and future needs. In the earthquake-affected areas in India, Japan and Pakistan, roads, houses and public facilities were constructed to the standards and needs in the years that they were built. At the time of rebuilding, the governments in these countries took advantage of new knowledge and technologies at their disposal to create a safer society that accommodates harmonious co-existence between nature and people, people and people, and people and their culture and history.

In India, Japan and Pakistan, better town planning was achieved. Building designs and town layouts integrated considerations for environmental protection and the service-needs of the poor. Cities and villages were re-architected, thus accentuating local cultural identities that may have been eclipsed by development and social changes in the pre-disaster period. Streets were enlarged. In Pakistan, public facilities were built back with an aim for better service delivery.

Like damage assessment, the participation of the affected communities in the risk assessment is critical. It serves as an educational process for the communities to learn about imminent dangers and potential risks in their environment. Urban redevelopment and relocation/resettlement were common features in post-disaster recovery and reconstruction. Its implementation needed the consent of the affected population as private lands had to be expropriated by the government and new settlement areas had to be drawn up. Improved understanding on the complexity of recovery and rehabilitation and potential disaster risks helped ease the work. In Sri Lanka, through the people’s process, a village-level committee managed the resettlement programme and fostered community consensus to alleviate social issues faced by new settlers in existing communities. In Japan, a new movement was effected, a volunteer culture in support of disaster risk reduction and preparedness.

C. Capacity mapping:

Rehabilitation, recovery and reconstruction effected new or newly amended procedures, introduced new equipment, and required working with a multi-disciplinary team. Efficiency and effectiveness of past operations depended on the competency and ability of potential implementing agencies to carry out the work. A capacity mapping was used in Pakistan to appraise “who can do what,” “how ” and “what is needed.”

The findings from the mapping exercise helped to determine a range of technical training needs, as well as supported appropriate resource allocation for capacity building.

D. Vulnerability assessment:

Disasters broke the social fabrics and ties among people, and revealed various vulnerabilities people face in their lives. The rebuilding of communities after a disaster can help minimize these vulnerabilities and building better lives for certain social groups whose particular needs and concerns were not attended to in the past. A vulnerability assessment is used to create an understanding about social and economic vulnerabilities in terms of who, why, what, and how.

International experience and research have shown women, orphaned children, youth, disabled, elderly and the poor generally need specific attention in recovery and reconstruction. Their vulnerability to social exclusion and exploitation often pre-dates the disaster and becomes greater in the aftermath of the disaster. Interventions have proved to be much more effective when post-disaster programmes for vulnerable groups integrated findings of vulnerability analyses from a multidisciplinary perspective.

In **Japan**, the elderly were identified as a vulnerable group and they had specific needs for shelter. The government housing programme, while distributing housing grants, built collective homes for the elderly who lived alone.

In **Pakistan**, the recovery and reconstruction programmes prioritized seven vulnerable groups: widows without male children over 18 years; women with disabled husbands; divorced/abandoned women or unmarried women who have crossed their marriage age and depended on other people; physically or mentally disabled people; unaccompanied minors; unaccompanied elderly; and landless people. Specific interventions to address these populations' needs included a women's information center in rural Pakistan and livelihood grants.

How to ensure reconstruction efforts are able to target the social and economic sectors that need the most help?

- Socio-cultural factors included in all assessment methodologies
- Equal representation and participation of ethnic minority communities in planning and implementation.
- Use of culture sensitive methodologies and materials; language, approach, choice of materials,
- Ensuring all agencies are sensitized on gender, culture and rights issues as per specific communities.

2. Participation:

Participation of the affected communities and individuals in planning, implementation, monitoring and evaluation is of utmost importance for post-disaster recovery and reconstruction. In India, Pakistan and Sri Lanka, community-level committees have formalized roles in all stages of recovery and reconstruction. This arrangement helped to minimize difficulties in recovery process and ensure the quality of services. Two participatory approaches were presented at the workshop:

A. The People's Process

The people's process is a bottom-up planning and implementation process. It has been used effectively in tsunami recovery in Sri Lanka, which focused on infrastructure and livelihoods. The approach allowed the Government to effectively coordinate recovery and rehabilitation,

manage inter-ethnic tensions, and minimize social exclusion. The community was at the center of the process as planning started at the community level and by the communities themselves. Local knowledge and local resources were brought to optimal use. The Government played a supportive and facilitative role in managing and disbursing funds, overseeing the work, and upholding equity and transparency in the overall process.

B. The Owner-Driven Approach

The owner-driven approach was used in India and Pakistan, specifically in the housing sector. It is an approach that recognizes the valuable knowledge and contribution of the people and communities affected by the disaster and supports the partnership between the public and private sectors. The government provided the funds and monitored progress; non-governmental organizations implemented the work with local communities.

In India, an intensive public information campaign was mounted to cultivate public understanding and awareness about policy and progress updates, administration procedures, benefit schemes, assistance amount and distribution systems, legal literacy programmes, implementation arrangements, and grievance redress mechanisms. In Pakistan, village-level committees assumed the responsibility for defining collective priorities, giving a voice to the vulnerable, educating local communities of new earthquake resistant construction standards, and coaching and giving technical support to house builders and local workers during the construction process. Women in their capacity as home owners and part of the community participated extensively in the monitoring of construction activities and community-level work.

Staff of non-governmental organizations and government officials were trained and re-skilled so that their technical knowledge could be effectively transferred to the people.

Mainstreaming cross-cutting issues in planning process: An example

India: “Advancing Social Inclusion Goals in Reconstruction and Development”¹³

Natural disasters destroy human security and can enhance social exclusion and vulnerability. The response can rebuild houses, people, and communities. Civil society organizations have assumed the role of facilitators in many disaster response programmes. They have an advantage in implementing economic and social empowerment programmes for women and vulnerable groups. This is an approach that has been adopted in crisis response.

Women’s positions in society are profoundly affected by the disasters. Earthquake responses can empower women by bringing them into the policy-making process.

3 Pillars of Gender-responsive and Pro-poor Recovery:

1. Participation for social re-organization that is to be supported by networks and capacity building to serve long-term social and economic development goals
2. Planning to be led by demands of the communities and extended to housing construction and monitoring
3. Partnerships – accountability to the people

Strategies that Worked

- **Access to participation in groups and networks**

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Prema Gopalan, Director, SSP,
<http://www.un.org.cn/public/resource/ec5e6f584054f7e49b38a37dd4cf2a41.pdf>

Mobilization of women and youth groups and teachers to work as outreach groups in recovery process.

- **Building local capacities**

Build local knowledge and capacity (based on a capacity assessment) on earthquake safe technology through mass information campaigns and training.

- **Empowerment of poor and vulnerable groups**

Listing and linking of vulnerable groups by communities and county-level bodies.

Mass information/education program on earthquake safety, entitlements and procedures to access loans subsidies and services

- **Improving access to economic resources for asset building**

Improve access to micro-credit, asset insurance and management of projects. Establishment of women's information centers.

- **Local to local partnerships**

Local governments need to work with communities and local county committees. The latter provided excellent mechanisms for implementation (materials distribution).

Involvement of women in reconstruction entails women's representation and active participation in all levels of programme planning and implementation. Experiences have shown that women's participation supported better delivery of aid and assistance and should be extended to housing construction (labour, recycle materials, access to loans and subsidies), and access to low interest micro-credit.

Government programmes for reconstruction often focused on reconstruction and emphasized infrastructure recovery. Social issues and implementation challenges faced by house owners needed to be resolved through mediation and facilitation.

Roles of government:

- Formalize the roles of county-level intermediaries (women, youth) as agency to maximize benefits for poor to accelerate the recovery and reconstruction process.
- Create formal agreements and committees to ensure women's participation in disaster recovery efforts.

3. Selected website references

Organization	Website
International Federation of Red Cross	http://www.proventionconsortium.org/?pageid=17
UN Habitat	http://www.disasterassessment.org/
UNFPA	http://www.unfpa.org/emergencies/
Swayam Shikshan Prayog (SSP) – Indian NGO	http://www.sspindia.org/Disaster.htm
UN China	http://www.un.org.cn/cms/p/resources/30/685/content.html

SECTION IV: IMPLEMENTATION – SECTOR APPROACH

1. Shelter

Relocation/resettlement and housing are key components of the housing and shelter sector in the recovery phase. A successful programme needs to be supported and coordinated with the work in other sectors including employment, infrastructure, livelihoods, and basic services. Lessons learned from the past show the value of sectoral coordination as well as the difficulties that entails.

A. Relocation: voluntary or mandatory?

A voluntary relocation programme tended to be more successful than a mandatory one. Environmental concerns and ecological restoration needs to be considered in the policy making process in order to ensure sustainable livelihoods in the new and old settlements. Community participation has proven to be a necessary process to establish consensus and community understanding, to depoliticize housing policy and programmes, and to minimize social tensions between new settlers and existing community members.

People's opinions

Indonesia: Following the Indian Ocean tsunami which totally destroyed the city of Aceh on the island of Sumatra:

- The Government of Indonesia initially decided that all rebuilt villages should be relocated 500 meters from the coastline.
- However, a previous study conducted some years following the relocation of three villages after a 1992 tsunami on Flores Island (Indonesia) showed that all the residents had moved back to the immediate shoreline within a few years.
- By presenting this study to the Indonesian planning authority (BAPPENAS) it influenced the Aceh Master Plan for Reconstruction to allow tsunami-affected villagers to rebuild in places of their own choosing.
- Similar observations about returning populations were made after the relocation of villages following the earthquake in Latur, India in 1993. They later influenced the Gujarat state authorities of India in 1999.

Japan: Work was divided into two phases: In Phase I the government's housing plan was disseminated for public inputs in terms of location and types of houses; and in Phase II the housing loan programme was implemented.

Pakistan: Resettlement in Pakistan is made through a law on internally displaced people that established eligibility criteria for government assistance. Priorities were set to, first, address the needs of those who lost land and, second, address the needs of those whose sites are on hazardous land.

Environmental protection and the Ecosystem

Past experiences have shown that concerns about the environment have to be articulated during the recovery period. Environmental impact assessments for each recovery project is essential and needs to be extended to address issues in the ecosystem,¹⁴ which often suffers in

¹⁴ On the ecosystem, see Susan Mainka, IUCN, <http://www.un.org.cn/public/resource/98c0bf5ce0add60d32d55731b056f575.pdf>

the long-term from natural disasters in terms of invasive species, habitat loss, pollution and overuse of natural resources during recovery.

Key questions to address include: What kinds of houses and livelihoods will be promoted? How can sustainable livelihoods and earthquake resistant houses be built up in the long term? How to ensure that the environment can support the people's sustainable livelihoods rather than being the objects of exploitation?

B. Implementation: Speed or sustainable and affordable housing¹⁵

At the implementation level in urban redevelopment and rural housing, construction cost and quality control is a daunting task, which is further complicated by equity, environmental protection, and logistics. Many permanent-housing programmes also face a low occupancy rate. Challenges in the past include:

- Agreements with the results of damage assessments and compensation packages
- People's willingness to relocate
- Over-designed houses
- Design not suitable to users' needs, lifestyles, and livelihoods
- Houses not built to new standards
- Occupational safety and health in construction
- Misunderstanding about earthquake resistant construction standards
- Logistics, rising prices, delivery, and availability of construction materials
- Choice of construction materials and environmental concerns
- Labour shortages in local areas
- Coordination between the housing programme and basic services to ensure that complete restoration of community lives
- Road accessibility

As is the case in the policy-level challenges, community participation has proven an extremely useful means to tackle these challenges as it fosters public understanding of the complexity and engages the community in the design, construction and monitoring of the work to their satisfaction. The community's knowledge of local resources and the needs of house owners is valuable information.

The India experience illustrates how existing planning systems in the housing sector were made better through the process of recovery and reconstruction:

India: the Bhuj Restoration had to contend with urban redevelopment and urban housing. The national government managed and implemented the whole programme, as town planning was not part of the institutional mechanism in the local government set up. Special legislation on a loss and damage assessment was issued to ensure standards practices and compensation calculation. Planning was carried out by the Area Development Authorities and construction provided by the Gujarat Urban Development Company. Cadres of urban planning consultants were assigned to consult local communities, local industries, state government, local governments, and women's organizations in the planning process. Engineering cells took charge of technical design, supervision of implementation, and financial structuring of construction projects.

¹⁵ Relevant presentations are country presentations and the following:

B.R Balachandran, <http://www.un.org.cn/public/resource/75916450780fde17da3b8753500ff637.pdf>

Maggie Stephenson, UN-HABITAT,

<http://www.un.org.cn/public/resource/1c5a3ad2d4ba23beabc361206a1c0c06.pdf>

During the course of reconstruction, managing public opinions and demands was one of the key challenges. People wanted fast and quick responses but the planning process took time. Relocation and land zoning were complex issues and it was decided to make it voluntary and partial. The approach used has helped improve the existing town planning system. The experiences demonstrate the value of stakeholders' participation in the planning process, efficiency in using existing institutional mechanisms while minimizing the introduction of new procedures, and integration of risk mitigation in reconstruction.

The Pakistan example demonstrates the community process, adjustment in housing standard design, mainstreaming of gender, environmental concerns, risk reduction and capacity building issues:

Pakistan: Application of owner-driven approaches in the rural housing sector

Quality construction and timely delivery were of social and economic importance in post-earthquake reconstruction. The government was responsible for issuing construction standards while implementing agents were responsible for ensuring that the standards were met. Hence, the understanding of safe construction principles and the skills of the workers were critical factors to building earthquake-resistant houses.

A diagnostic exercise was undertaken during the planning process. Collapsed houses and building were surveyed before the debris was removed in order to understand why different kinds of buildings collapsed. The findings showed that the building code that was in force before the earthquake caused the collapse. Thus, a new code had to be established. Through a process of participatory damage assessment and planning, local communities were able to provide knowledge about locally available construction materials and skills; why and when certain constructions performed well and not well. At the end of the process, an indigenous house construction design, which was feasible to implement in the difficult mountainous terrains, was discovered and later adopted. The community was to manage the construction process alongside technical engineers.

A capacity building programme was initiated in order to support the working partnerships between home-owners, community leaders and technical engineers who had never worked together before. The engineers had to learn new ways of communicating technical issues in order to effect quality housing. Picture books, simplified construction guidelines, checklists, and on-site demonstration and inspection were effective tools and ways to communicate ideas and change the prevailing construction practices. A targeted skills-building campaign was launched to promote better understanding and compliance with construction standards.

Regular site monitoring visits discovered construction practices that made houses more vulnerable to earthquake. Adjustments in implementation approaches were made as programmatic and technical challenges emerged: government housing standards did not fit the people's lifestyles; hence, the adjustment was made to the standards through a consultative process.

Gender: Special efforts were made to involve women in the construction process. Displacements have significant impact on women as they had to take care of household chores and the disaster made it harder for them to do their work. All programmes targeted households and engaged women in the process. Village committees were stipulated to have equal representation. Women managed the construction of the home and were supported with on-site advisory services. To assist women to cope with their loss and rebuild their lives, 15 psychological counseling

centers were set up in the earthquake affected areas so that women could have access to the services they needed.

The Japan experience (Nagaoya) illustrates how environmental concerns were mainstreamed and the use of the community process in the housing sector:

Japan: Environmental Considerations from the Niigata-Chuetsu Earthquake recovery, Nagaoya¹⁶

Debris clearing posed a significant challenge to recovery and reconstruction. In Japan, post-disaster waste is considered “general waste” and the cost of disposal is born by state budget through a subsidy programme. In view of environmental protection, efforts were made in the post Niigata-Chuetsu earthquake to reduce waste and optimum use of available materials. A system of debris collection and reuse was established and implemented.

Household waste was collected on a daily basis and free of charge. Each family was responsible to bring the garbage to collection points, while the city was responsible for collection. A 6ha land plot was designated as a dump site. The city organized collection of construction waste. Reusable construction materials were recycled for new construction.

The city was re-landscaped. Extensive consultation with local communities was critical to the success of the programme. Individual house designs were made to harmonize with the natural environment, utilize maximum natural resource to reduce energy use, and keep to local cultural heritage. Volunteers were mobilized to rebuild the cities and its cultural heritage.

2. Livelihoods:

Livelihoods support is a key feature in the early recovery programme.¹⁷ As disaster response transits from one phase to another, past experiences show some gaps in the delivery of assistance. The vulnerable population suffer the most when this gap occurs. A seamless disaster response keeps the momentum of building back better while fostering resilience within the affected communities. Local Level Early Recovery programmes (LLER) were implemented in Pakistan to ensure that the gains made during the humanitarian phase, such as community resilience, self-reliance, and risk reduction were not lost after the humanitarian phase ended. It bridged the humanitarian and the recovery/reconstruction phase together so that rehabilitation momentum was maintained, dependency or relapses minimized, and capacity that would be required for recovery activities built. LLER activities were implemented through multi-sectoral partnerships.

The Pakistan experience illustrates that recovery at the local or community level is important as it gradually builds resilience into the affected communities. In times of natural disasters, communities are the first group to react and provide assistance to members of the community. The pre-disaster living conditions can be reviewed and gradually addressed as the community is reestablishing itself for reconstruction.

¹⁶ Tsutomu Ono, Vice Mayor of Nagaoka,

<http://www.un.org.cn/public/resource/fcee0ce0a1144bad862ca742214ee4b1.pdf>

¹⁷ Jennifer Worrell, Chief, Early Recovery Team, Bureau of Crisis Prevention and Recovery, UNDP, <http://www.un.org.cn/public/resource/c8316166e92f741ea859bd558fd553c1.pdf>. See also, Salvano Briceno, Director, UN IDSR, <http://www.un.org.cn/public/resource/0734b3f8b5627a6a0982f039afd53e68.pdf>

A. Employment¹⁸

Different experiences from past disaster recoveries show that “Build back better” means “Return to work.” For the poor and vulnerable groups, disasters have robbed them of their livelihoods. They have lost employment, income-earning opportunities, and if they are in the agricultural sector, harvest, crops, equipment and inputs. For them, work is not a pre-existing destination but a means of living that needs to be restored.

Employment in recovery and reconstruction is multi-dimensional. Challenges are multi-level both at the institutional and the individual level. Different interventions are required for work in the formal and informal economy to suit various groups of workers. The disaster often quantifies the number of vulnerable workers whose (re)entry into the job market will need specific support. For these reasons employment interventions in recovery and reconstruction will have to be addressed at the policy level and reinforced through institutional capacity building and careful programme design.

Relief and recovery phase – Damage assessment

For workers in the formal economy and contributors to social security, processing social security claims and calculating compensation amounts often posed significant challenges to the social security offices. Notwithstanding the diminished capacity within the local social security offices, loss of contributors’ data and files added to the routine work. More importantly, the sudden drop in contribution and the surge in compensation after the disaster may place the social security fund in jeopardy. A policy decision on how to finance and protect the fund is critical. Country experiences recommended financing social security benefits by drawing from a national disaster recovery and reconstruction fund and assisting local social security offices with a surge capacity to speed up disbursement of compensation to the contributors.

For workers and operators in the informal economy, such as agricultural workers, the self-employed, micro-entrepreneurs, home-based workers, their loss of livelihoods and jobs are difficult to assess as many were unregistered – and thus “non-existent” – before the disaster. Their livelihoods and businesses depended on their individual social networks that have been broken up by the disaster. They need to recover a means of living, but may have completely lost all productive assets. Hence a quick return to work may be out of reach. In many instances, the disaster creates new economies that in effect further displace these workers. The skills they have and the types of livelihoods they had may no longer be viable.

Natural disasters also create new types of vulnerable workers while subjecting some groups of workers to greater vulnerabilities and social exclusions. These workers are for example disabled workers who need vocational rehabilitation, older workers who faced limited or no job opportunities due to the prevailing age discrimination in the labour market, youth who prefer earning opportunities to completing school out of family economic necessity, single parents who have no access to child care support, and first time job seekers who have little life skills and little knowledge about labour laws. There are also the unemployed who had had difficulties obtaining jobs prior to the disaster. Employment services for these workers will have to be different in design and content depending on the workers’ particular characteristics, vulnerabilities, and skills levels.

¹⁸ Alfredo Lazarte, Director of ILO/CRISIS,
<http://www.un.org.cn/public/resource/786d047e4a7f031929612f12256fff7f.pdf>

Labour Market Information – Enabling employment-centric recovery planning and policy making

Against the above-mentioned backdrop, a “damage and vulnerability assessment” in employment means an assessment of the post-disaster labour market conditions, which would yield a set of information for recovery planning and implementation. Key assessment questions may include:

- What is the composition of the labour force in the post-disaster period in terms of demand and supply?
- Who and where are the vulnerable workers?
- What are the impediments in the labour market that contribute to their vulnerability?

A labour market information data collection and analysis would need to be initiated and conducted on a regular basis to monitor challenges and opportunities in the post-disaster labour market. The analysis can help guide the work of the emergency employment services units and local vocational training providers in refining their implementation strategies. In Pakistan, the post-earthquake labour market system was used effectively to guide programme design and implementation in the infrastructure and housing sector.

Furthermore a labour market information system also generated valuable information with regards to wages and consumers’ power. In recovery and reconstruction, inflation is a norm and wages for local workers are influenced by aids rather than labour market conditions. The higher wages of local workers serve to undermine the employability of local workers. Appropriate interventions and labour market policies will be necessary to balance the needs for rapid economic growth and a sustainable one.

Early recovery programme – Mainstreaming employment in recovery and reconstruction investments:

Recovery is the restoration of the social and economic order. Economic institutions would have to be restored and production/operation capacity replenished. Such is the goal of recovery. But recovery and reconstruction activities themselves generate jobs. A challenge learned from past disaster responses is how to maximize these employment opportunities for local workers, in particular vulnerable workers, whose need for employment were urgent and at times difficult to fulfil. In other words, can the recovery process regenerate social protection mechanisms for the vulnerable population?

Vulnerable workers’ need for social protection can be met through a local level early recovery programme. Examples from Pakistan, Sri Lanka, and Indonesia are:

- Labour-intensive cash for work programmes in the infrastructure sector which provided short-term employment and skills training to the poor, support the building of local small and petty contractors, and enhance the capacity of the local Public Works Office;
- SME programmes in collaboration with local Chambers of Commerce and targeting business support, training and micro-credit, specifically for women in poor communities

Such projects are possible and feasible when coordination mechanisms are in place for inter-agency/inter-departmental collaboration at the level of policy, programme design, implementation, and monitoring. Labour market information and analysis of employment opportunities that will be created by recovery and reconstruction have helped support the implementation of such employment generation-cum-social protection schemes.

Strengthening institutions and capacity building – Recovery Phase

Post-disaster labour markets posed real challenges to local labour offices. A successful employment promotion places significant demand on the local employment bureau, in particular the employment services, the vocational training, and the employment protection units. Traditional employment-promotion mechanisms would need to be adapted. In past experiences, the following adaptations were made:

AREA	Regular Mechanisms	Adapted mechanisms	Actions
Labour market information system	Depository of job seekers' and employers' needs	Active profiling of demands and supplies	- Estimate job opportunities in recovery activities - Profile vulnerable people
Job Placement	As opportunity arises	Anticipating opportunities to enable employability	- Enhance employability through short-cycle skills training - Establish agreement to channel skill trainees with various recovery programmes
Social Security	Risk sharing and contribution-based	Extraordinary surge of demands met with extraordinary funds	- Estimate financial liability - Secure extra funding - Fast-track delivery of benefits
Enterprise development services	Broad scope of businesses associated with daily value chains	Targeting sectors that surge after the earthquake	- Construction sectors - Production & distribution of basic goods - Services for reconstruction
Public Works & Cash for Work Programme	Based on re-investment planning and traditional contract system	Seeking to absorb local labour, helping to restore small paths to remote communities, & develop local contractors	- Implement cash for work programmes in road, building works. - Preferences to labour intensive options – techniques, “Local Clauses” procurement conditions, ad-hoc skills training - Prioritizing isolated communities

Improving quality of construction activities – protecting workers and labour standards

In past disaster response, concerns and action on occupational safety and health in training and construction activities have been underinvested. Agencies contracted to build houses and infrastructure did not have sufficient funds for occupational safety, health and skills training for workers. This shortage of funds and technical expertise was problematic particularly in the context of community contracting and livelihoods support for the vulnerable population. Furthermore, disregard for occupational safety and health also had adverse effects on the environment, e.g., disposal of construction and hazardous materials.

Capacity building through partnership programmes with local labour bureaus helped improve working conditions as well as the quality of the construction. On site and mobile training units were able to coach workers and assure adequate occupational safety and health in the work arrangements at the construction site.

The local labour bureau had to exercise discretion regarding application of labour laws. The urgencies of recovery can translate into problems such as long working hours, no overtime compensation, young workers exposed to hazardous work and a highly stressed workforce. In post-tsunami recovery, a campaign to educate employers and aid organizations on employers' responsibilities included guidelines providing practical information about the labour code and

mandatory requirements to follow. Advisory services on type of contracts and payment of wages were also provided.

B. Agriculture:¹⁹

Recovering the agricultural sector in the aftermath of a national disaster is a race against time as the planting season is fixed. Farmers need to harvest and plant new crops. But the soil conditions may have changed and identification of alternative crops and livestock. Difficulties abound in getting the necessary expertise to carry out the damage assessment, replacement of assets, procurement of agricultural inputs and tools, and technical assistance to farmers.

Local level early recovery programmes for farmers have proven efficient in addressing their need for incomes and quick return to agricultural production. Farmers have to wait many months after the planting season before they receive earnings from their harvest. It is in this waiting period that some early recovery activities can be introduced.

Major lessons learned from past disaster recovery and reconstruction programmes:

Institutional:

Tailored interventions have always been useful. Surge capacity is necessary to ensure timely assessment and assistance delivery. An emergency fund is accessible for livelihoods support to the agricultural sectors, as agricultural work is dictated by natural harvest cycles. Timely delivery of support helped shorten dependencies. The time pressure has been best met through partnerships arrangements between government institutions, international non-governmental organizations, community-based organizations and universities. The partnerships also reduced overlapping and duplication of resources.

Technical lessons learned:

- Rapid assessments need to be followed by detailed assessments using the livelihood-based approach
- Food security-centred approach, blending food aid and agricultural production is effective in efforts to target assistance to the most vulnerable: careful dialogue and evidenced-based.
- Technically robust, locally adapted solutions need to be identified to bridge the emergency-rehabilitation gap.
- Appropriate gender considerations when selecting beneficiaries are essential to minimize the social exclusion of women.
- Livelihood programmes in agriculture need to link short and long-term perspectives – transit from emergency support to medium-term rehabilitation for “building back better.” At the same time, mainstreaming disaster risk reduction by setting up early warning systems, preparedness and contingency planning is important to minimize future risks.

A “heaven of abundance” has been used to describe Sichuan’s agriculture and livestock sectors. Damage to the agriculture sector has been extensive: farmers’ assets and properties (houses and storage) were destroyed; greenhouses, mushroom sheds, tea and fruit trees also suffered. There is a change in soil composition, thus new crops will have to be introduced. Agricultural inputs such as fertilizers, tools, and equipments have to be provided on an urgent basis to prepare for the next planting seasons. Procurement and delivery may face some challenges. As public facilities have been severely damaged there is an urgent need for grain storage for the next harvest.

¹⁹ Rajendra Aryal, Regional Emergency Coordinator, FAO,
<http://www.un.org.cn/public/resource/87a0628665436838243ac649612bf9d6.pdf>

3. Basic social services

A. Education:²⁰

Education has not been well attended and resourced in past emergencies and recovery experiences. Previously, the critical role of students, education managers and teachers went unrecognized. Affected communities often strongly push for provisions for the education of their children. International reviews have shown that education can save and sustain life. It protects children from harm and exploitation and helps meet the children's psychological needs. Furthermore, education allows passage for messages on essential life skills (for example, health and hygiene, HIV/AIDS prevention and risk reduction).

In Pakistan, the Government and ERRA prioritized investment in education in the emergency and recovery operations. Furthermore, there was a well-coordinated humanitarian education cluster response to meet the common standards. There was a good balance between capacity building and improvement in school curriculum and reconstruction of school buildings. As a result, a minimum standard in education in emergency and reconstruction operations was implemented and achieved.

Education in building back better means:

- earthquake-resistant, safe and accessible schools
- increased enrolment and retention rate
- gender parity, equality, and equity,
- better quality education
- children-centred teaching and learning methods
- competent education planners and managers

A multi-phased and multi-level capacity building approach was used in Pakistan and proved effective. Teachers and education personnel are trained in teaching methods, psychosocial counselling, and school construction so that they could supervise the work. Education managers were trained on building standards and how to enforce the standards so that they could provide necessary inputs from the users' perspective in school building programmes. In general, they were trained so that they could undertake planning and management, monitoring and evaluation, and financial management functions with regards to disaster preparedness planning, mobilizing the support of communities and PTAs, and general planning.

Lessons learned from the Pakistan experience:

1. Success still depends on coordinated planning, evidenced-based and community-based standards and procedures
2. Corresponding training for contractors and engineers to understand the roles of education managers in school construction and standards
3. Formalization of roles and responsibilities of teachers and education managers in the process of building schools, including reporting procedures
4. Continuous revision/update of plans
5. Inclusion of standard training programmes and curriculum (sustainability)

²⁰ Eli Waerum Rognerud, Programme Specialist in Education Post-Conflict and Post-Disaster, UNESCO, <http://www.un.org.cn/public/resource/70ef7007fd05a8b954b6698d70d819d0.pdf>

Disaster Risk Reduction in the construction of school buildings:²¹

The disaster impact reduction cycle has to be broken. This means during each disaster response, efforts are made to minimize the risks, decreasing the need for response in the future. Students and teachers are the knowers about the disaster risks they have in the school. In one instance, the students conducted a risk assessment and afterwards they asked for relocation. The teachers then communicated this to the community for public discussion.

The example above illustrates the fact that disaster risk reduction is everyone's responsibility and appropriate action has to be taken, particularly in the following areas:

- Assess and plan: planning has to be supported by assessment
- Physical protection: making sure the physical environment is safe. This is often a missing component in education and protection efforts – school buildings are not safe.
- Response capacity building: government also has a responsibility in disaster prevention.

Education in emergency and recovery situation requires that:

1. Schools are built to the standards of the legislated building codes, with disaster resistant designs. Construction is well-supervised to ensure the standards are met.
2. Contractors, school personnel and education managers understand building codes, designs and standards, and have the level of competence to ensure full compliance.
3. Contractors, school personnel and education managers understand “why” buildings stand and fall.
4. Construction is carried out by skilled personnel under regular monitoring and supervision arrangements.
5. Safe school construction is integrated into training programmes for engineers, school personnel and education managers.

Annex B presents a suggested bibliography of disaster risk management in education.

B. Water, Sanitation, and Hygiene (WASH):²²

Water and sanitation help to prevent the outbreak of new epidemics that can aggravate the impact of the disasters. In relief recovery and reconstruction, serious attention should be placed on behavioural change by increasing skills and communications training in staff training. Social marketing efforts must be mounted to send the message to the people and change their behaviours. Water, hygiene and sanitation are the most effective crisis-prevention tools that we have internationally. A campaign to simply promote hand washing with soap will minimize public health issues.

²¹ Maria Petal, RISK RED, <http://www.un.org.cn/public/resource/897ea461e5e2f103e8db1db63407fb0f.pdf>

²² Paul Sherlock, Senior Adviser, Emergencies, IASC WASH Cluster Coordinator, UNICEF <http://www.un.org.cn/public/resource/b6a7673f36eb485f82d1946b48ab0661.pdf>

In recovery and reconstruction, priorities need to be given to creating an enabling environment, behavioural change campaigns and the installation of water and sanitation services in households and communities.

Lessons learned from different emergencies:

Sector coordination – national and local levels of different departments (health and water authority)

Information management - part of good coordination, covering a whole range of assessment monitoring and information tools

Long-term challenges:

Coordination between national and provincial levels and different departments needs to be further tackled. A reassessment needs to be undertaken to understand the extent to which water supply has been damaged. New technologies are difficult to introduce but we have to ensure we find ways to protect water protection. Participatory and cross-cutting issues are important.

C. Health:²³

During the emergency period, the health care system needs a surge capacity to treat the injured. This particular need is part of a humanitarian operation. In the recovery phase, restoration of a healthcare system entails assessment of the damages sustained by health care facilities, rehabilitating health care facilities to minimum safety standards and building a local healthcare system so that a certain level of preparedness is met.

The Philippines experience illustrates a restoration of public healthcare system.

The Philippines is prone to cyclone, land slides, and earthquakes. The disasters created major health emergencies.

In the restoration of health services during the early recovery stage, authorities at the provincial and municipal levels are implementers. National provides capacity support. In emergencies, there is not enough capacity. The provincial and municipal levels set up a Joint Command Post (JCP) to provide surge capacity and emergency action. Composite teams were organized to undertake:

- medical consultation
- disease surveillance
- rapid assessment surveys
- psychosocial stress debriefing
- water and environmental sanitation
- vaccination teams
- I/NGO collaboration desk

Lessons learned from the Joint Health Command Post:

In the emergency phase, the following are crucial components for effective work:

- clear provincial and regional coordination management,
- pooling of human and financial resources,
- fast action on decision-making and implementation,
- curtailing and preventing outbreaks.

In the restoration/recovery and reconstruction phase, lessons learned and challenges are:

- delayed and incomplete reporting of damaged health facilities

²³ Dr. Ingrid Magnata, Deputy Regional Director, Department of Health – Center of Health Management, Bicol Region, the Philippines, <http://www.un.org.cn/public/resource/f0c26ca8d0235f756393193ffac1f9ee.pdf>

- no criteria to assess partial and total damages on health facilities
- local government public health offices have their own way of reporting
- questions on safety and health in health facilities arose

In the case of the Philippines, to ensure that data on damaged health facilities are accurately collected, an evaluation team consisting of WHO and Department of Health (DOH) at the national level was sent to the disaster affected area. The survey provided information on the type of quick remedial action and estimations on costs; gave recommendations on repair and strengthening, retrofitting and reconstruction works, and shared information with all stakeholders. The rehabilitation of public health facilities is legislated through the Executive Order no. 634 on Creation of Bicol Calamity Assistance and Restoration Efforts (B-CARE) to ensure funding for reconstruction of government health facilities.

Long-term restoration of healthcare effort through the Health Sector Reform Agenda (2008-2012) will expand the scheme to additional 4 provinces – covering public health, hospital (safe facilities), financing (the Province-wide Investment Plan for Health, e.g., social health insurance), regulation and governance (sector-wide approach).

Psychosocial Counselling:

It is unfortunate that attention and provision of psychosocial counselling services to the disaster-affected communities often waned as the post-disaster emergency faded out. The people’s resilience to put their lives back together has been misread as an absence of need for mental health services leading to insufficient investment in psychosocial counseling. As will be clear in the gender section, people’s mental health needs vary from one individual to another and there are particular cultural dimensions. Mental health problems usually manifest in the family, often through abusive behaviours. Children and women are often kept hostage to stress-induced family violence. While it may be difficult to assess the needs for psychosocial counselling services in terms of quantity and duration, it is important that recovery and reconstruction plans take account of the need for psychosocial counselling, psychosocial activities and other forms of support.

Psychosocial counselling activities can be mainstreamed in recovery activities. The obvious need is a training programme for teachers and other recovery personnel so that they are able to provide counselling support to the people they work with. Less obvious are workers’ needs for relief from stressful and exhaustive working conditions. Personal issues may affect workers’ performance as families are rebuilt and they deal with loss from the disaster. Further advocacy for recognition of mental health as a critical element of recovery and reconstruction remains to be addressed.

In Pakistan, 15 women’s information centers were created in rural areas. The centers are to facilitate women’s access to recovery and reconstruction information and services, but they also provide a much needed space for women to get together and build on each other strengths through communal activities. For those who needed counselling support they would also receive referral support.

4. Selected website references

Theme	Website
Housing and Shelter	http://ww2.unhabitat.org/programmes/rdmu/
Emergencies and sustainable livelihoods	http://www.undp.org/cpr/ http://www.undp.org/cpr/we_do/early_recovery.shtml http://www.ilo.org/public/english/employment/crisis/about/disasters.htm http://193.43.36.103/sd/dim_pe4/pe4_050201_en.htm http://www.fao-ilo.org/fao_ilo_emergencies/en/
Basic social services	http://202.54.104.236/intranet/EHManagement/References/2%20Bibliography%20and%20websites/start.html http://www.euro.who.int/emergencies http://www.unesco.org/science/disaster/protection_disaster.shtml http://www.riskred.org/
UN China	http://www.un.org.cn/cms/p/resources/30/685/content.html

SECTION V. MONITORING & DOCUMENTATION

1. Monitoring:

Efficiency and effectiveness in disaster response depends in part on public trust and confidence in the capability of the recovery and reconstruction agency and their understanding of the complexity of recovery. Public opinions and expectations changed very fast and had to be managed. In India, Pakistan and Sri Lanka, public participation in programmatic matters were essential to recovery operations. It was a result of an extensive information and capacity building campaign that sought to create a common understanding about the goals, priorities, procedures, and progress of recovery.

The monitoring and reporting system that linked financial, social and technical concerns was particularly useful in the housing sector. It was a valuable tool for work with the disadvantaged population. In these three countries, the participation of local level committees, women and ethnic minorities' in the decision making process was formalized and strengthened through an on-going capacity building programme.

Such a system provided solutions for some prominent issues in the housing sector such as:

- substandard house construction
- social tensions among different ethnic groups in resettlements
- application of earthquake resistant construction standards
- relocation and resettlement

Partnerships, implementation, and monitoring:²⁴

The PPAF is a non-governmental organization in Pakistan. It was engaged by ERRA to deliver housing subsidies, which are paid in instalments and in accordance with the results of the damage assessments. 205 union councils were set up as implementation team. Its work covers monitoring progress in house construction, outreach to the vulnerable population, and transfers of grant payments to beneficiaries.

The monitoring system covers both construction engineering and social impact aspects. It is integrated into the overall implementation mandate. Regular reporting schedules were established. Payment is made against reports. Standardized procedures are established and disseminated.

The monitoring team were organized by six partner organizations in three regions. Each team consists of engineers and two social organizers (one man and one woman). A photographic monitoring approach was used. 90,000 house owners and crafts-people were trained on housing standards. Monitoring data is captured in the detailed MIS system that integrates financial, social, vulnerability, engineering and impact data fields.

The experience highlights the need to have clarity of purpose on whether to disburse funds quickly or to ensure quality housing. External assistance injecting cash into local communities has to be dealt with carefully. Self-reliance has to be induced quickly. Education, engineering designs and enforcement are crucial components of the monitoring programme.

²⁴ <http://www.un.org.cn/public/resource/6860a4604405b2d1dfe95f85a5b066cc.pdf>

2. Documentation:

Process documentation, analysis of lessons learned and good practices, and sharing of experiences form an important strategy in the Hyogo Framework of Action. Global efforts to minimize the impact of natural disasters are refined as the global community learns from each operation. The learning points from each disaster response is stored and managed for use in advocacy campaigns and strengthening of institutions, mechanisms and capacity at all levels, be they global, national, provincial and/or community. The Secretariat of the International Strategy of Disaster Reduction facilitates such a process.

3. Selected website references

Theme	Website
Data collection, analysis and dissemination	www.preventionweb.net .
Good practices and tools	www.unisdr.org .

Annex A: Workshop Agenda

	Monday, 14 July 2008
9:00 – 9:30	<p>Opening:</p> <ul style="list-style-type: none"> • Opening Remarks (<i>Ms. Qiu Hong, Deputy Minister of Commerce</i>) • Opening Remarks (<i>Mr. Khalid Malik, United Nations Resident Coordinator in China</i>) <p>Moderator: Mr. Zhang Kening, Director General, International Department of MOFCOM</p>
9:30 – 9:45	Coffee break
9:45 – 11:45	<p>Session 1: Learning from International Good Practices in Recovery and Reconstruction</p> <ul style="list-style-type: none"> • Video Documentary on Wenchuan Earthquake • Experiences from the Pakistan Earthquake (<i>Lt. General Nadeem Ahmed, Former Deputy Chairman ERRA</i>) • Experiences from the Hanshin-Awaji (Kobe) Earthquake (<i>Mr. Tomio Saito, Vice-Governor of Hyogo Prefecture</i>) • Experiences from the Gujarat Earthquake (<i>Dr. P. K. Mishra, headed the Gujarat State Disaster Management Authority</i>) <p>Questions & Answers</p> <p>Moderator: Mr. Khalid Malik, UN Resident Coordinator in China</p>
11:45 – 13:00	Lunch
13:00 – 15:00	<p>Session 2: Rebuilding Sustainable Housing and Settlements</p> <ul style="list-style-type: none"> • Planning for the Reconstruction of Bhuj: A Case Study in Post Disaster Recovery (<i>Mr. BR Balachandran, Managing Director, Alchemy Urban Systems</i>) • Technical Standards for Rebuilding Earthquake Resistant Housing (<i>Ms. Maggie Stephenson, Head of Technical Department, UN-HABITAT Pakistan</i>) • Experience from the Niigata-Chuetsu Earthquake: Environmental Considerations in the Reconstruction Effort (<i>Mr. Tsutomu Ono, Vice-Mayor of Nagaoka</i>) • Considerations for Post-Earthquake Environmental Restoration in China (<i>Dr. Susan Mainka, Senior Coordinator, International Union for Conservation of Nature</i>) <p>Questions and Answers</p> <p>Moderator: Mr. Toshi Noda, Asia-Pacific Regional Director of UN-Habitat</p>
15:00 – 15:15	Coffee break
15:15 – 17:15	<p>Session 3: Restoring Jobs and Livelihoods – Local Economic Recovery</p> <ul style="list-style-type: none"> • Post-Earthquake Livelihoods Recovery: Employment and Social Protection Dimensions (<i>Mr. Alfredo Lazarte, Director of Programme on Crisis Response and Reconstruction, ILO</i>)

	<ul style="list-style-type: none"> • Recovery and Rehabilitation of Agriculture-based Livelihoods (<i>Mr. Rajendra Aryal, Regional Emergency and Rehabilitation Coordinator for Asia, FAO</i>) • Community Based Livelihoods Economic Recovery (<i>Ms Jennifer Worrell, Chief of the Early Recovery Team, Bureau for Crisis Prevention and Recovery, UNDP</i>) <p>Questions and Answers</p> <p>Moderator: Ms. Constance Thomas, ILO Director for China and Mongolia</p>
17:30-19:00	Reception (Ballroom B)
	Tuesday, 15 July 2008
9:00 – 10:30	<p>Session 4: Planning with the Poor and Vulnerable and Social Cohesion (1)</p> <ul style="list-style-type: none"> • Monitoring a Earthquake Rehabilitation and Reconstruction Project (<i>Mr. Kamran Akbar, Pakistan Poverty Alleviation Fund</i>) • Community-Based Poverty Reduction in Remote Villages (<i>Ms Prema Gopalan, Director of Swayam Shikshan Prayog</i>) <p>Questions and Answers</p> <p>Moderator: Mr. Wu Zhong, Director General, State Council Leading Group Office of Poverty Alleviation and Development</p>
10:30 – 10:45	Coffee break
10:45 – 12:15	<p>Session 4: Planning with the Poor and Vulnerable and Social Cohesion (2)</p> <ul style="list-style-type: none"> • People's Process in Post-Disaster Recovery and Reconstruction (<i>Mr. Toshi Noda, Director, Regional Office for Asia and the Pacific, UN-HABITAT</i>) • Targeting and Social Cohesion: Tsunami Reconstruction (<i>Mr. UWL Chandradasa, Director of Disaster Management Center, Sri Lanka</i>) • Gender Considerations in Reconstruction Planning (<i>Ms. Kiran Bhatia, Regional Gender Adviser, UNFPA</i>) <p>Questions and Answers</p> <p>Moderator: UNDP China</p>
12:15 – 13:30	Lunch

13:30 – 15:30	<p>Session 5: Restoring Social Services</p> <ul style="list-style-type: none"> • Water and Sanitation (<i>Prof. Paul Sherlock, Senior Adviser, Emergencies, IASC WASH Cluster Coordinator, UNICEF</i>) • Capacity Building of Education Managers: Their Role in the Recovery and Reconstruction Effort (<i>Ms. Eli Waerum Rognerud, Programme Specialist in Education Post-Conflict and Post-Disaster, UNESCO</i>) • Disaster Prevention Education and School Risk Reduction (<i>Ms. Marla Petal, Founding Co-Director of Risk Red</i>) • Restoring Healthcare Services: A Work in Progress (<i>Dr. Ingrid Magnata, Deputy Regional Director of Health for Bicol Region in the Philippines</i>) <p>Questions and Answers</p> <p>Moderator: Ms. Yin Yin Nwe, UNICEF Representative in China</p>
15:30 – 15:45	Coffee break
15:45 – 16:45	<p>Session 6: Partnerships, Financing and Monitoring</p> <ul style="list-style-type: none"> • Managing Partnerships and Resources in the Reconstruction Process (<i>Mr. Said Faisal, Deputy for Business and Economic Development, Aceh and Nias Rehabilitation and Reconstruction Board</i>) • Partnership Mechanisms of the ISDR System (<i>Mr. Salvano Briceno, Director, UN/ISDR</i>) <p>Questions and Answers</p> <p>Moderator: International Department of MOFCOM</p>
16:45 –17:00	<p>Closing Remarks</p> <ul style="list-style-type: none"> • UN (<i>Constance Thomas, ILO Director for China and Mongolia</i>) • MOFCOM (<i>Mr. Zhang Kening, Director General of International Cooperation, MOFCOM</i>)

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