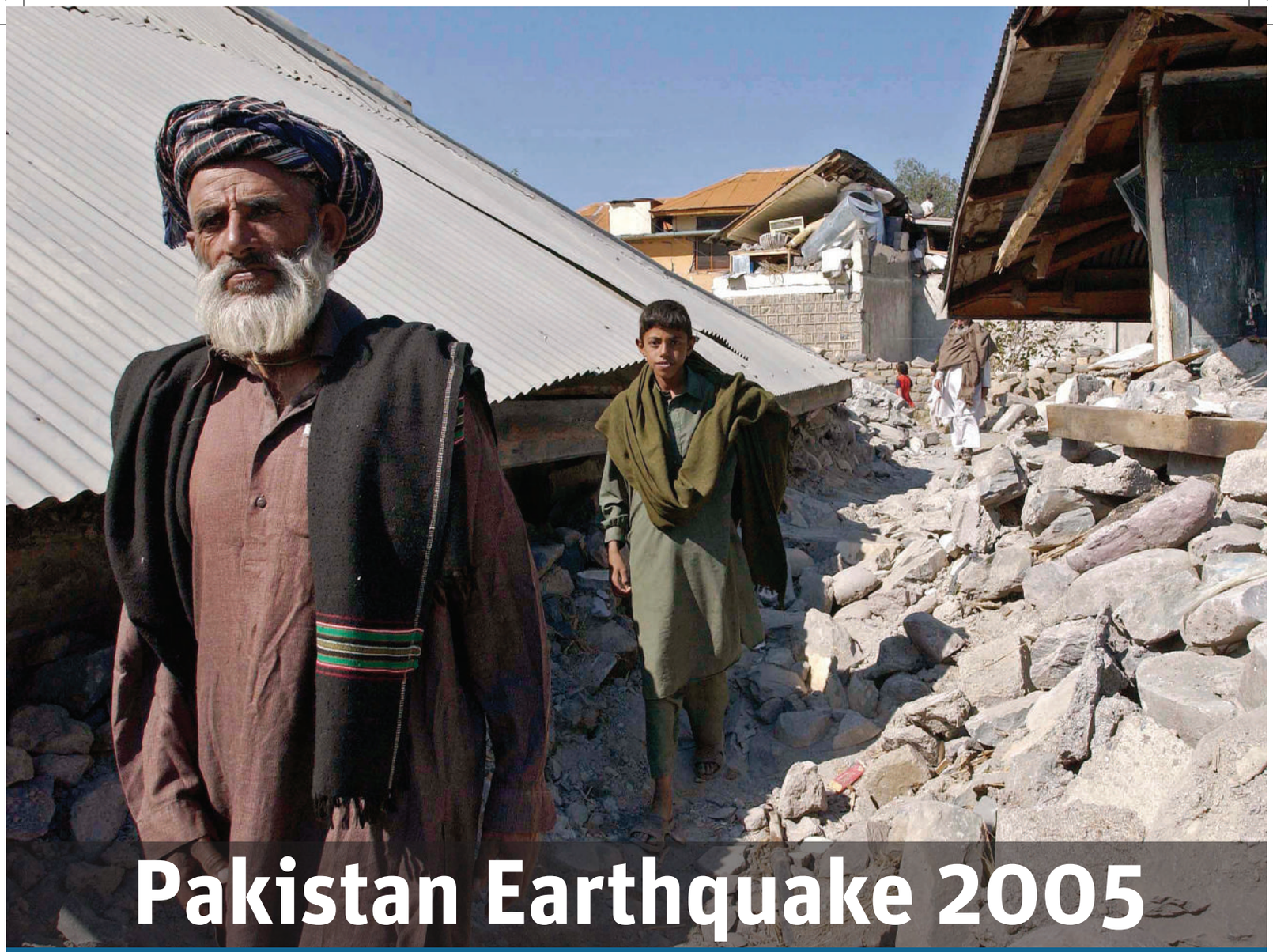

Pakistan Earthquake 2005

The Case of Centralized Recovery Planning and Decentralized Implementation

Country Case Study Series
Disaster Recovery Framework Guide

May 2014

DISASTER RECOVERY FRAMEWORK

PAKISTAN NDMA

ERRA

UNDP

GFDRR
Global Facility for Disaster Reduction and Recovery

WORLD BANK GROUP


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Introduction to the Recovery Framework Case Study Series

The World Bank's Global Facility for Disaster Reduction and Recovery (GFDRR) is working with the United Nations Development Program (UNDP) and the European Union (EU) to develop a Disaster Recovery Framework (DRF) Guide that will help governments and partners in planning for resilient post disaster recovery while contributing to longer term sustainable development. The guide is based on global good practices gleaned from country experiences in disaster recovery. Hence, the development of the DRF Guide entailed the development of country-level case studies as well as thematic case studies on disaster recovery.

These case studies have been designed to collect and analyze information on: i) disaster recovery standards and principles adapted by countries for specific disasters; ii) means adopted by countries for planning recovery including efforts, considerations and provisions (if any) for making such recovery efficient, equitable and resilient; iii) policies, institutions and capacities put in place by countries to implement and monitor disaster recovery; and iv) ways and means adopted by countries to translate the gains of resilient recovery into longer-term risk reduction and resilient development.

Importantly, these case studies aim to learn from, and not evaluate, country reconstruction initiatives. Practices learned from each country's experience will inform the contents of the DRF Guide. Additionally, the case studies examine the planning processes and not the implementation details of recovery experiences. As such, they do not seek to offer a comprehensive account of the post-disaster recovery program as it unfolded, but rather provide details and insight into the decision-making processes for reconstruction policies and programs.

Unless otherwise noted, photographs presented in the document have been included courtesy of ERRA and UN-HABITAT.

Abbreviations

ADB	Asian Development Bank
AJK	Azad Jammu and Kashmir
BBB	Building Back Better
BISP	Benazir Income Support Programme
CMTs	Construction Monitoring Teams
DNA	Damage and Needs Assessment
DRC	Data Resource Centers
DRR	Disaster Risk Reduction
DRU	District Reconstruction Unit
ERRA	Earthquake Reconstruction and Rehabilitation Agency
FRC	Federal Relief Commission
GOP	Government of Pakistan
KMC	Knowledge Management Cell
KPI	Key Performance Indicators
KPK	Khyber-Pakhtunkhwa
MIS	Management Information System
MOU	Memorandum of Understanding
NESPAK	National Engineering Services Pakistan
NDMA	National Disaster Management Authority
NWFP	North West Frontier Province (now KPK)
PDNA	Post-Disaster Needs Assessment
PEC	Pakistan Engineering Council
PERRA	Provincial Earthquake Reconstruction and Rehabilitation Agency
PICU	Project Implementation Coordination Units
RME	Reporting, Monitoring, and Evaluation
SERRA	State Earthquake Reconstruction and Rehabilitation Agency
SUPARCO	Space and Upper Atmosphere Research Commission
TVS	Targeted Vulnerability Survey
UN	United Nations
USD	United States Dollar
UNDP	United Nations Development Program

The 2005 Earthquake in Context

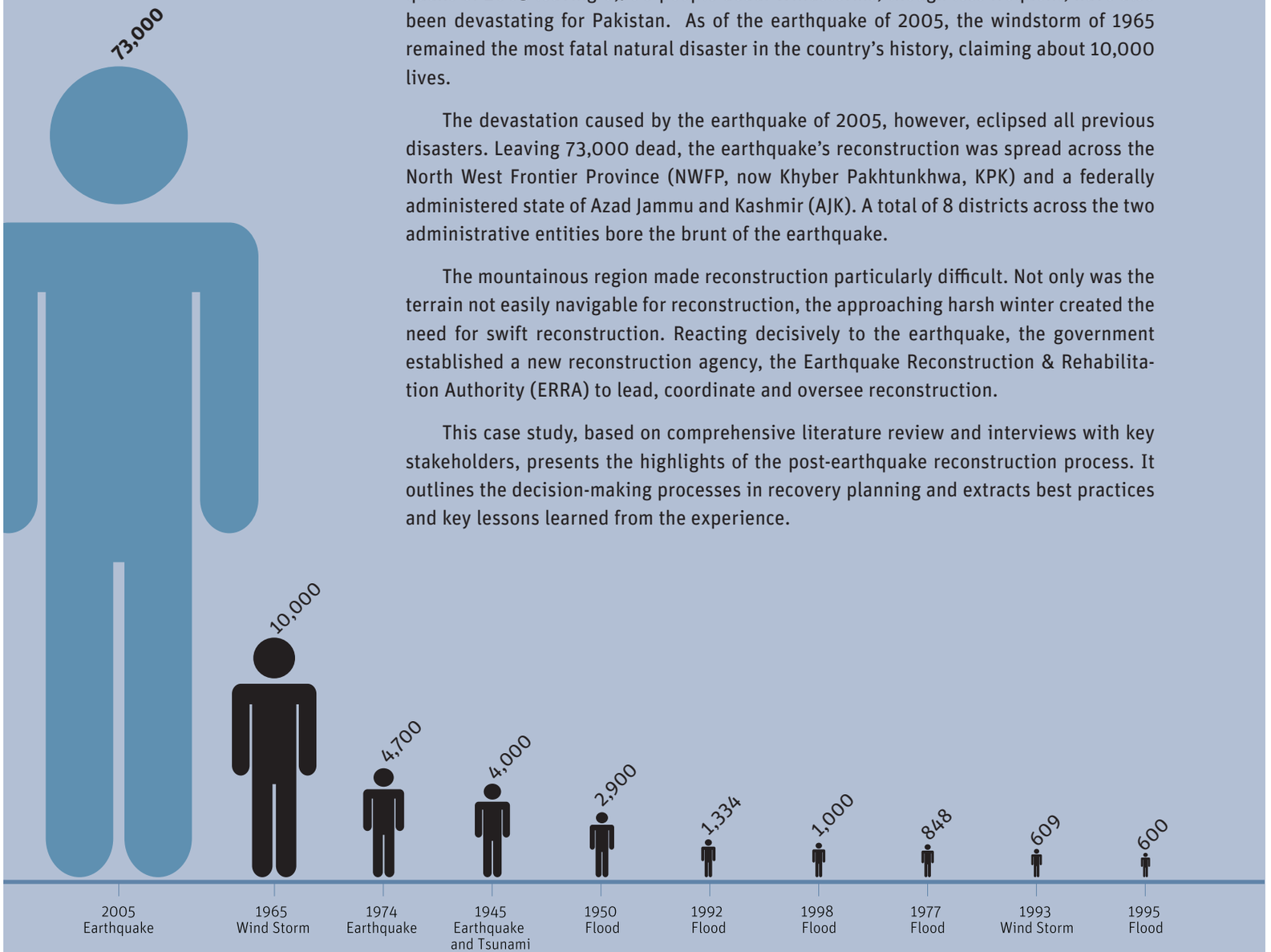
Located in South Asia, Pakistan is the 6th most populous country in the world. Pakistan is divided into four provinces, a state and federally and provincially administrated territories. The country is exposed to several types of natural disasters, prominent among which are earthquakes, floods, droughts, cyclones and landslides.

Recurring floods formed the bulk of the natural disasters to have struck Pakistan since the country's formation, with the collective toll of the floods prior to the earthquake of 2005 leaving 6,700 people dead. Windstorms, though less frequent, have also been devastating for Pakistan. As of the earthquake of 2005, the windstorm of 1965 remained the most fatal natural disaster in the country's history, claiming about 10,000 lives.

The devastation caused by the earthquake of 2005, however, eclipsed all previous disasters. Leaving 73,000 dead, the earthquake's reconstruction was spread across the North West Frontier Province (NWFP, now Khyber Pakhtunkhwa, KPK) and a federally administered state of Azad Jammu and Kashmir (AJK). A total of 8 districts across the two administrative entities bore the brunt of the earthquake.

The mountainous region made reconstruction particularly difficult. Not only was the terrain not easily navigable for reconstruction, the approaching harsh winter created the need for swift reconstruction. Reacting decisively to the earthquake, the government established a new reconstruction agency, the Earthquake Reconstruction & Rehabilitation Authority (ERRA) to lead, coordinate and oversee reconstruction.

This case study, based on comprehensive literature review and interviews with key stakeholders, presents the highlights of the post-earthquake reconstruction process. It outlines the decision-making processes in recovery planning and extracts best practices and key lessons learned from the experience.



Disaster Fatalities in Pakistan

Contents

On the tranquil early morning of October 8th, 2005, while most people slept, an earthquake measuring 7.6 on the Richter scale devastated Pakistan's northern areas of Azad Jammu & Kashmir (AJK) and Khyber Pakhtunkhuwa (KPK).

73,000 people died during the disaster, 128,309 people were injured, 600,000 houses were destroyed, rendering 3.5 million people homeless. 6,000 educational institutions and 574 health facilities were destroyed or damaged. The earthquake caused extensive damage to roads, water and sanitation facilities, power, and telecommunication infrastructure and other services while civil administration in affected areas became largely dysfunctional with the destruction of a large proportion of government buildings.

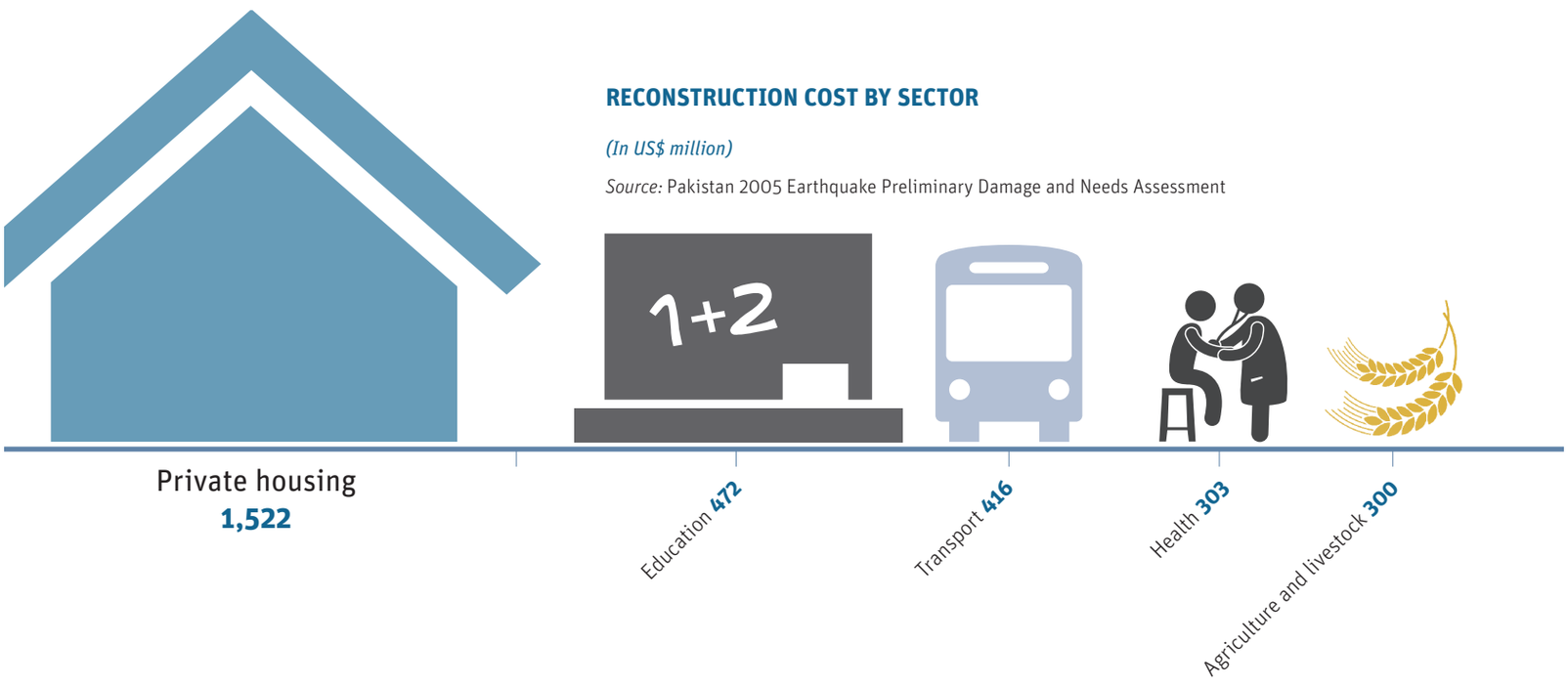
DISASTER KEY FACTS	
Area Most Affected	Azad and Jammu Kashmir; North-West Frontier Province (now Khyber-Phuktunkhwa)
Affected Population	130,000 injured and 3.5 million homeless
Number of Fatalities	73,000 dead
Most Affected Sectors (based on needs)	Housing; Education; Transport
Estimated Overall Damage (US$)	US$3.5 billion
Estimated Overall Impact (% GDP – based on damage)	2.91% (includes Damages & losses)

RECOVERY KEY FACTS	
Institution Managing the Reconstruction Process	Earthquake Reconstruction and Rehabilitation Agency (ERRA)
Institution Implementing the Reconstruction Process	Work plans designed by ERRA; contracts implemented by large and small NGOS, contractors, and pre-qualified engineering firms.
PDNA (Y/N)	Yes
Donor Conference (Y/N)	Yes
Amount Pledged (US$)	US$6.2 billion

RECONSTRUCTION COST BY SECTOR

(In US$ million)

Source: Pakistan 2005 Earthquake Preliminary Damage and Needs Assessment



A Sense of Scale: Overall Reconstruction Needs at a Glance

1. *The destruction and loss caused by the earthquake was the worst recorded in the history of Pakistan to date*. Immediately after the earthquake, the local-level administration and provincial governments, the military, the Space and Upper Atmosphere Research Commission (SUPARCO), and UN Agencies conducted preliminary damage surveys, which became an important tool for program planning and the organization of relief activities. The data collected from the rapid survey helped establish a preliminary overview of the extent of damages which later became the basis for the more detailed Damage and Needs Assessment (DNA).

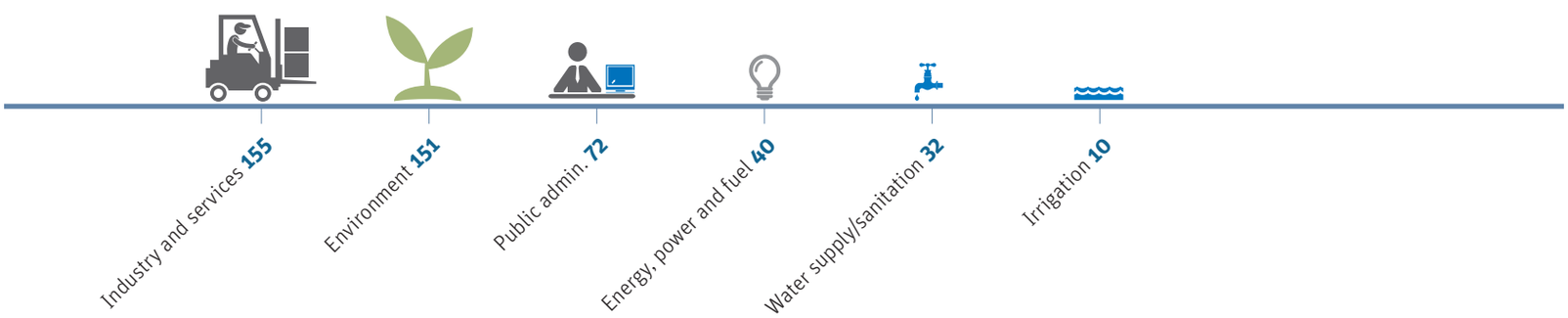
2. The Damage and Needs Assessment carried out by the Government of Pakistan, in partnership with the Asian Development Bank, and the World Bank was published five weeks after the earthquake. Relief, early recovery, and reconstruction costs were cumulatively estimated at USD 5.2 billion. An additional USD 576 million was estimated in indirect income losses. This was the first such government and centrally-led, systematic and participatory damage and needs assessment in the country, with the active involvement of the international community. This assessment provided the Government of Pakistan with a comprehensive estimate of needs and coherent recovery strategies for each affected sector, to be presented at the Donors' conference that was soon to follow. This assessment was instrumental in leveraging a record amount of funding pledges from international partners, with the result that the reconstruction program stood amply funded in the first few months after the disaster.

OVERALL COSTS OF THE EARTHQUAKE

Category		US$ million
Relief		1,092
Death and Injury Compensation		205
Early Recovery		301
Restoration of Livelihoods		97
Reconstruction		3,503
Short-term Reconstruction	*450*	
Medium & Long-term Reconstruction	*3,053*	
Total		**5,198**

* An additional $576 million were estimated as indirect income losses.

3. The level of destruction warranted a huge multi-sectoral recovery and reconstruction program, with private housing as the single largest sector accounting for 44% of the overall reconstruction needs. This was followed by the education sector at 13% and the transport sector at 12%, while the health sector and agriculture, and livestock accounted for 9% each.



4. Early and credible assessment provided a fairly reliable estimate of the overall resource requirements and envelope to reconstruction policy and financial decision makers in the country, allowing them to initiate strategic and holistic reconstruction planning. Such strategic perspective subsequently helps in developing operational plans for the commensurate deployment of the human, financial, and information resources for the efficient and effective implementation of such large scale reconstruction programs. It also helps in setting up credible data-based baselines for the subsequent monitoring and evaluation of the recovery program, at the programmatic, sector, and project levels.

5. However the most important value addition of the initial disaster damage and needs assessment perhaps lay in setting out and developing broad consensus among various tiers of government and across key development partners on the underlying policies and principles. This only ensured strategic consistency in the development of recovery strategies and estimates across all sectors, such as a focus on livelihood regeneration and building back better; it also guided and facilitated the subsequent evolution of the reconstruction program. This included initial recovery planning activities, such as the development of detailed sector strategies, programs and operational plans, addressing identified needs through project development, setting up institutional frameworks to manage the recovery process, and establishing efficient financing mechanisms for recovery. It also informed the process of recovery implementation through consistent physical quality control standards at the project and intervention level, as well as governance, accountability and supervision processes for the reconstruction program, both as an integrative whole and in its detailing at the lowest intervention level.

Setting up a Broad and Consistent Policy Framework for Recovery Planning through the Preliminary Damage and Needs Assessment

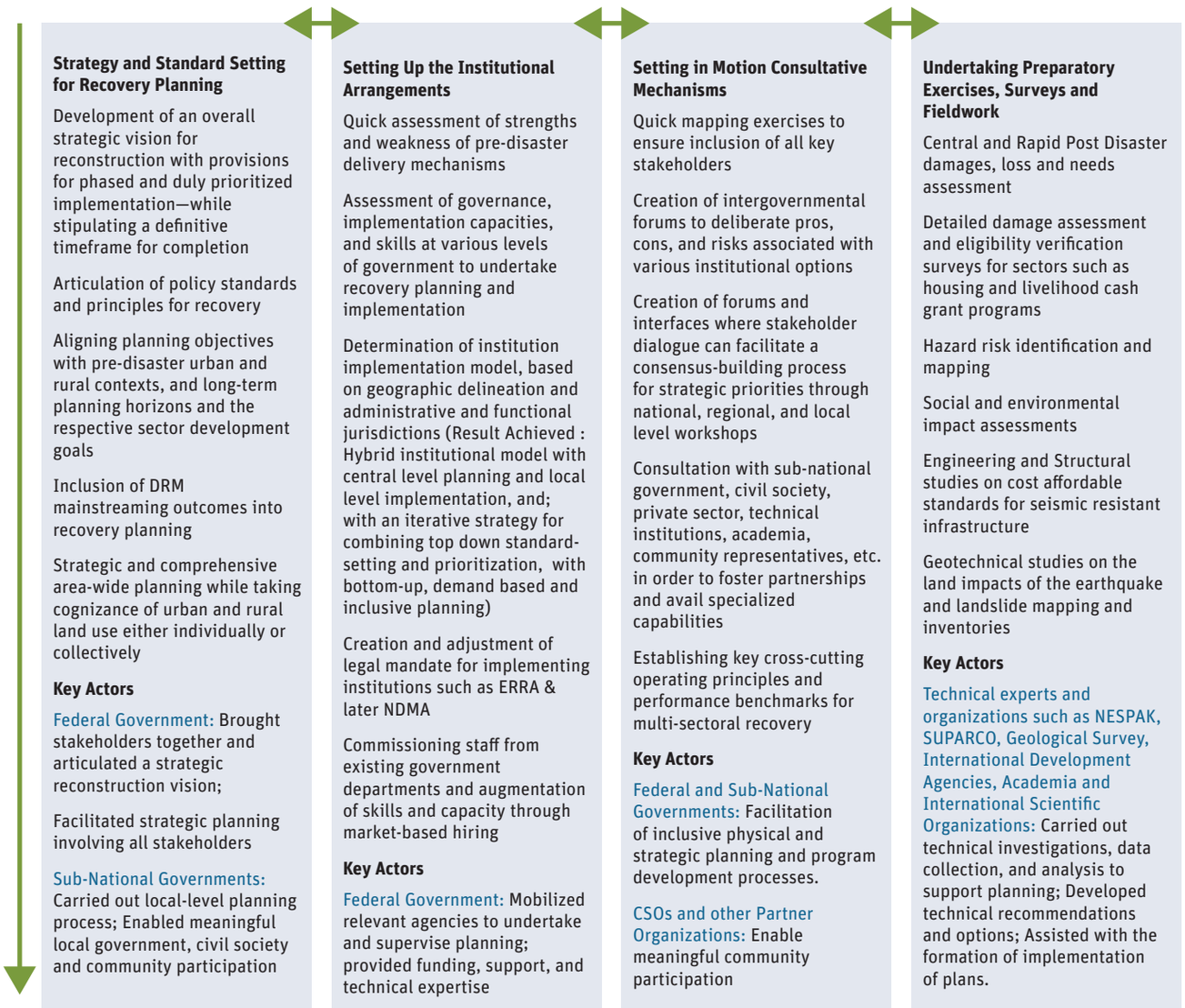
The Damage and Needs Assessment set forth guiding principles that were mutually formulated by the Government and international development partners to ensure strategic consistency and operational harmony in subsequent recovery planning and implementing activities. These included:

a. Rapid rebuilding of people's livelihoods
b. Independence and self-sufficiency
c. Subsidiarity and decentralization
d. Focus on the most vulnerable and socially-disadvantaged groups, such as children, women, and the disabled
e. Secure development gains and progress in poverty reduction
f. Restoring capacities to manage the recovery process
g. Transparency and accountability
h. Avoid the creation of new disaster risks
i. Encourage engagement of private sector and civil society
j. Coordinated and coherent approaches to recovery

Overall Recovery Planning Approach and Process

6. *Given the urgent need to commence reconstruction and start delivering in the wake of mounting public expectations, the Government of Pakistan adopted a simultaneous and integrated 4-pronged approach for post disaster recovery planning, learning from international good practices*. This process entailed implementing a succession of phased actions in the medium to long term. It also significantly reduced planning time, compared to routine and sequential approaches, and ensured the inclusion of most key stakeholders from the inception of the planning process. The chart below provides a brief recap of the key steps of recovery planning undertaken by the government, most of which were conducted in either parallel, or sequential but overlapping timeframes.

Figure 1: Simultaneous Four-Pronged Approach for Recovery Planning by the Government of Pakistan



Policy Framework for Recovery

7. *Almost concurrently with the estimation of the aggregate damages and recovery needs arising from the disaster through the DNA, the Government of Pakistan developed and set up a strategic vision for the overall reconstruction program*. This included enunciating the strategic objectives for overall reconstruction and recovery, articulation of policy standards; stipulation of a possibly phased program and definitive timeframe for its implementation, identification of stakeholders and development of consensus over strategic priorities for a multi-sectoral scope of work, geographic delineation, and determination of administrative and functional jurisdictions.

8. *Another early step taken by the GOP was the establishment of cross-cutting operating principles and performance benchmarks for multi-sectoral recovery*. These included: central policy making and coordination; subsidiarity and local implementation, public sector facilitation of private recovery, restoration of sustainable livelihoods, independent oversight and transparency, effective management of public expectations and grievances, fostering public private partnerships and availing community capabilities, ensuring and promoting longer term disaster risk reduction and climate change adaptation, environmental and social safeguards, and gender-issues and protection of vulnerable groups.

9. *Concurrent with ERRA's establishment, key sectors for reconstruction were identified and sectoral strategies were developed that aimed at mainstreaming overall reconstruction objectives across all sectors*. Virtually immediately after the disaster, drawing on the initial assessments available and stakeholder consultation, twelve sectoral recovery strategies were developed. These included: rural/urban housing development, water and sanitation, governance, transport, power, communications infrastructure, environment, livelihoods, tourism, social protection, health and education. All sectoral strategies additionally aimed at mainstreaming disaster risk reduction, promoting environmental safeguards, poverty reduction and gender sensitivity across all activities.

10. *The political government also took early ownership and the President's office was actively involved in setting basic recovery guidelines*. Some of the key policy imperatives articulated by the political leadership included: (a) building back better, (b) converting adversity into opportunity, and (c) pro-poor recovery.

11. *Building Back Better: In consultation with sector experts and international agencies, ERRA identified the incorporation of Disaster Risk Reduction as a primary criterion for building back better*. All reconstruction would be seismically resilient so that future earthquakes would have a less damaging effect. Through the same consultative process, a focus on needs-based reconstruction was identified as a second operational criterion of building back better. Instead of status quo ante as the target of reconstruction, community needs would be taken as the primary driver. In practice, this meant that if, for example, a school that had previously had a capacity of 50 children, now needed to service 100 because of changes in the community, the school would be rebuilt to service the new need.

12. *Converting Adversity into Opportunity: As with building back better, the disaster was seen as an opportunity to reconstruct not just to status quo ante, but with new innovations and improvements*. Based on consultations with sectoral experts and international agencies, the principle of 'converting adversity into opportunity was ventured upon to replace out of date infrastructure and service delivery systems with newer, more economically profitable and efficacious ones. Thus, for example, prior to the earthquake, first aid clinics, maternal and child care centers, and family planning centers were all located in disparate buildings. Reconstruction was organized so that these centers were collocated as existing or new Basic Health Units. Similarly, prior to the earthquake, district government offices were distanced from each other. As part of the reconstruction of government buildings, district government offices were placed in the same district government complex, not only making it possible for someone to have all of his/her municipal needs met at one place, but also improving communication and coordination among the various sections of the

district government. In the livelihood sector, subsistence farming, a primary per-earthquake enterprise, was replaced with cash crop farming. This proved particularly successful through the cultivation of commercial flowers.

13. *Pro-Poor Recovery: The pro-poor recovery guiding principle was translated as reconstruction that was actively aimed at contributing towards an equitable society and ensuring adequate access to services, programs, and resources, particularly land and capital for all.* In this regard, particular attention was given to prioritizing reconstruction planning that addressed the needs of vulnerable individuals and groups, including the socio-economically disadvantaged: elderly, widows, single mothers, and single- or no-parent families. In line with this principle, reconstruction in the livelihood sector provided additional grants for those designated as landless, virtual landless, poor, or otherwise vulnerable families. For reconstruction activities that provided benefits to affected populations based on certain criteria, legal assistance for the vulnerable was also provided. For example, in the housing sector reconstruction, ERRA's flagship initiative, local partners and communities were encouraged through social mobilization to support construction of houses for widows. The housing sector also prioritized a focus on tenants instead of owners. The decision was also taken to categorize all the kutcha (mud) houses as destroyed so that the full compensation / cash grant could be provided to support households in constructing earthquake resistant houses. ERRA undertook special initiatives for disabled persons providing prosthetic limbs, skills training, micro-credit, and job opportunities in newly established facilities like the Social Welfare Complexes (SWCs) and Women Development Centers (WDCs).

14. *Having identified the 12 sectors targeted for reconstruction, the ERRA's next step was to develop principles for cross-sectoral prioritization.* The still-nascent ERRA did not have the requisite capacity to undertake all twelve sectoral interventions simultaneously, making prioritization and staggered programmatic work necessary. To achieve the greatest impact as early as possible, and to "affect the lives of people directly" in the early phases of reconstruction, those sectors with the greatest immediate impact on affected populations were prioritized. With winter approaching, and a large homeless population living in temporary shelters, housing emerged as the primary sector to receive reconstruction attention. Simultaneously, with the local economy devastated, and no ready means of income generation, the livelihood sector was also seen as reconstruction sector of immediate impact on affected populations.

15. *Both the housing and livelihood sectors highlighted the need to protect and focus on vulnerable communities in reconstruction activities.* As housing was a critical need for the most vulnerable populations, they stood at great risk of destitution without a revival of the livelihood sector. While housing and livelihood sectoral reconstruction was underway, education, health, and water were also recognized as priority sectors requiring immediate attention. Public infrastructure, tourism, and environmental protection received lower priority and the early recovery measures—such as the construction of short- and medium-term structures, and the erection of pre-fab buildings—were deemed sufficient for immediate needs.

16. *A set of principles was established to determine criteria for sectoral prioritization.* With implementation devolved to State/Provincial Authorities, and further to District Reconstruction Units, the identification of priority sectors alone was insufficient to ensure a cohesive and uniform recovery across the various affected districts. There was also need to ensure that intra-sectoral reconstruction work-plans for each area aligned. The following key principles outlining intra-sectoral prioritization were thus instrumental in ensuring that, though devolved, implementation across the nine districts was compliant to overall reconstruction objectives.

    a. **Broadest Impact:** Those buildings and programmatic interventions were prioritized, that had the greatest impact on the lives of the affected community. Thus, schools which could educate the greatest number of students, hospitals that could service the greatest number of people, and bridges that connect the greatest number of people were prioritized.

    b. **Building Most-Accessible Structures First:** Another key criterion was accessibility. The earthquake

Cash grants revive livelihoods and help revitalize economy

With the livelihood sector virtually destroyed by the earthquake, a Livelihood Support Cash Grants Program was initiated to meet affected populations' immediate needs. The program benefitted over 290,000 households.

In line with the overall aims of reconstruction, the program provided a means of targeting the most vulnerable populations. It was recognized that the neglect of vulnerable groups in the design of sectoral interventions would greatly exacerbate their marginalization. Thus, the program targeted families of eight or more; families with an income of less than Rs. 3000, and families with a disabled members. 27% of all families helped were women-headed.

These families were provided a monthly allowance of Rs. 3,000 for six months. After this period, the program was extended for another 6 months for the 23,000 most vulnerable female-headed households.

Not only did these cash grants ensure that vulnerable families had a means of meeting essential life needs, it also contributed to the revitalization of the affected region's economy.

had struck in an area that is not easily navigable. In the interest of rapid recovery, infrastructure reconstruction in the most inaccessible affected areas was de-prioritized while structures in more accessible areas were built first.

c. **Avoiding Legal Disputes:** This was particularly relevant to land disputes. Establishing land ownership after the earthquake proved a legal challenge as many land deeds had been lost in the disaster and competing claims on lands were commonplace. Even distinguishing between private and public land proved to be challenging. Meanwhile, work on disputed land was scheduled once ownership had been established by the courts. It is worthy of note that legal assistance was provided for the protection of vulnerable populations and gender sensitivity.

d. **Maintaining a Gender Balance:** For each intervention that would benefit men, an intervention was prioritized that would benefit an equal population of women. For example, for each school servicing 500 boys, a girls' school of equal capacity was reconstructed.

17. *Following the above-mentioned cross-sectoral prioritization, ERRA's first task was to translate the government's reconstruction principles into sector recovery programs, which it did in consultation with sector experts and international agencies.* With some data already available via the rapid assessment conducted for relief and the PDNA conducted for the donor's conference, ERRA approached reconstruction by first transforming the guiding principles into broad programmatic interventions. An example of a sector strategic framework, in this case for the flagship USD 1.5 billion 'Rural Housing Reconstruction Program,' serves as a good illustration of how the cross-cutting guiding principles were translated into corresponding sector recovery strategies and programs.

18. The government also set-up consultative processes and forums for inclusive recovery planning at various tiers, such as the broad stakeholder groups on housing sector policy and operational aspects. For housing, three forums were successful in continuous and proactive multi-stakeholder inclusion in the initial years of the program. Standard processes and forums established for housing sector consultations included: (a) carrying out mapping exercises to identify, and ensure inclusion of all key stakeholders, (b) creation of intergovernmental forums that help develop both horizontal and vertical lines of communications, to deliberate pros, cons, and risks associated with various institutional options for housing sector planning and its implementation, and (c) creation of wider forums and interfaces where stakeholder dialogue facilitated a consensus-building process for operational aspects in particular through national, regional, and local level workshops involving sub-national governments, civil society, technical institutions and academia, private sector, community representatives, etc. Concurrent with the policy and strategy formulation processes described

Policy Principle	Manifested through the following corresponding strategies:
ERRA's Housing Program Objective: Provided financial and technical assistance to affected home owners in AJK and KPK, in reconstruction or rehabilitation of their damaged or destroyed houses.	
1. Ensuring Owner-Driven Housing Reconstruction – *homeowners in charge of rebuilding their own homes*	Providing an enabling environment to builders and homeowners, through: ■ Prior training, information and canvassing campaigns, ■ Rebuilding with familiar methods & easily accessible materials—*ensuring sustainability and cultural preferences in design* ■ Providing technical assistance during construction, ■ Promoting the use of salvaged material or additional resources such as hired trained craftsmen, etc., ■ Ensuring building materials supply chains, ■ Facilitating the opening of bank accounts, etc.
2. Assistance and Inspection Reconstruction & Restoration	■ Mobilizing a large number of assistance and inspection (AI) teams, for house-to-house outreach ■ Disbursing in tranches, linked to stages of construction and adoption of seismically acceptable standards ■ Disbursement through Banks after progress/quality validation ■ Resources for forming the AI teams and management structures for these resources, to be procured through a public-private partnership arrangement
3. Ensuring seismic safety	■ Having in place a review and approval mechanism for designs, construction guidelines and training curricula through the development of reference minimum structural design standards that meet internationally accepted requirements for low cost earthquake resistant housing, such as – Thinner walls – Lighter roofing – Well-connected structural systems – Discourage katcha type (mud) construction ■ Construction and planning to take into account the results of seismic zoning
4. Uniform assistance packages – *across all programs and funding sources* **Maximizing Outreach** – *through optimized designs and implementation mechanisms*	■ Coordinate multiple reconstruction initiatives & standards for equity. ERRA to ensure – application of uniform policies across the board – Ascertain application of seismic design standards – Ensure full spatial coverage – Reduce risks of beneficiary double counting or being missed ■ Cash grants to target core housing – which may not be necessarily proportionate to the replacement value of loss ■ Reconstructing only where necessary through damage assessment that distinguishes against set criteria between houses needing reconstruction and those only needing economically feasible restoration/retrofitting ■ Replacement of a destroyed house with a new seismic resistant core unit ■ Restoration and strengthening of damaged houses to seismically acceptable standards ■ Rebuilding In-situ - addressing land ownership & availability issues, minimizing relocation costs ■ Relocating only where necessary – i.e., where risks or hazards remain very high due to: – Seismicity – Topography – Soil conditions – Other environmental factors

continues

Policy Principle	Manifested through the following corresponding strategies:
4. Uniform assistance packages *(Continued)*	■ Donors/philanthropists encouraged to fund rural housing and adopt entire communities/ villages/ towns ■ Program sustainability to be enhanced through parallel efforts on rehabilitation of livelihoods, physical and social infrastructure linking housing to livelihoods and infrastructure rehabilitation, etc. ■ Addressing future needs of the affected communities (such as possible loan schemes over and above the cash grants)
5. Ensuring judicious use of grants; reducing and managing conflicts and grievances; avoiding socio-economic distortions, inequities and disparities	■ Damage assessment criteria to remain consistent across all affected districts (surveys may be done for specific trouble areas) ■ Eligibility criteria to include land ownership criteria or in the case of tenants, agreements/authorization from owners to rebuild the house ■ MOUs to be signed with beneficiaries to ensure the judicious and best possible use of the grants with penalizing clauses for those found in intentional incompliance ■ Developing and putting in place participatory and inclusive information management and grievance redressal systems

above, the Government of Pakistan also took early and timely decisions towards setting-up the institutional arrangements for undertaking and meeting the challenges of the reconstruction program that lay ahead. This essentially consisted of the following processes: (a) a quick review and clarification of the pre-existing, multi-tiered and multi-sectoral institutional mandates; (b) developing commensurate institutional structures for managing and executing the reconstruction program; (c) the creation or readjustment of legislation for the proposed modifications to pre-disaster arrangements, and; (d) identifying and mobilizing the requisite capacities, skills and other resources to be commissioned to staff from multiple levels of government, semi-government agencies, various technical institutions, international development bodies, and the private sector.

Institutional Framework for Recovery

19. *Concurrent with the policy and strategy formulation processes described above, the Government of Pakistan also took early decisions towards setting-up the institutional arrangements for undertaking and meeting the challenges of the reconstruction program.* This consisted of the following processes: (a) a quick review and clarification of the pre-existing, multi-tiered and multi-sectoral institutional mandates, (b) developing commensurate institutional structures for managing and executing the reconstruction program, (c) the creation or readjustment of legislation for the proposed modifications to pre-disaster arrangements, and (d) identifying and mobilizing the requisite capacities, skills and other resources to be commissioned to staff from multiple levels of government, semi-government agencies, various technical institutions, international development bodies, and the private sector.

20. *When the 2005 earthquake struck, Pakistan's legislative and institutional structures were designed for recurring medium-sized floods and focused on disaster management and not on disaster recovery and reconstruction.* The single existing law at the time, the Calamities Act of 1958, a primarily relief-centric provision, only afforded affected populations temporary forgiveness from land and water tax. Paralleling this, the only organizations available to offer post-disaster response were locally organized Emergency Relief Cells, whose mandate was limited to the most immediate relief-needs.

21. *The magnitude of the earthquake galvanized the government into decisive action. It was recognized nearly from the outset that the severity of damages and losses required a radical response and the Earthquake Reconstruction and Rehabilitation Authority (ERRA) was established as an autonomous body on 24 October, 2005.* The earthquake had struck two regions: the state of Azad Jammu and Kashmir (AJK) and the North West Frontier Province (NWFP, now known as Khyber-Pakhtunkhwa, KPK). Both territories had their own governments, budgets and line ministries, and consequently separate and distinct chains and structures of command. Given the required scope of reconstruction, and with no precedent for coordinating a cross-territorial reconstruction effort, there was high likelihood that if left to the development departments of the two governments, programs modalities and implementation would quickly diverge in the two areas. On 10 October, two days after the earthquake, the Federal Relief Commission (FRC) was established to address immediate relief needs. On 24 October, less than three weeks after the earthquake, the Earthquake Reconstruction and Rehabilitation Authority (ERRA) was established to lead the reconstruction phase of the post-earthquake response.

22. *ERRA was set up as a time-bound central authority under the Prime Minister's office to tackle residual relief, early recovery, and long term reconstruction and rehabilitation, with long term efforts forming the overwhelming bulk of its mandate.* ERRA's scope of work included strategic planning, resource mobilization, coordination with all stakeholders, and monitoring reconstruction and rehabilitation activities in earthquake affected areas. ERRA was established because of a recognized need for a central oversight body to coordinate the activities of the broad spectrum of actors participating in the reconstruction—ranging from multilateral and bilateral donors, international NGOs, civil society, and government agencies. It was anticipated that having multiple agencies overseeing reconstruction would likely become unmanageable. Thus, centralizing some functions within a single, dedicated body was seen as essential.

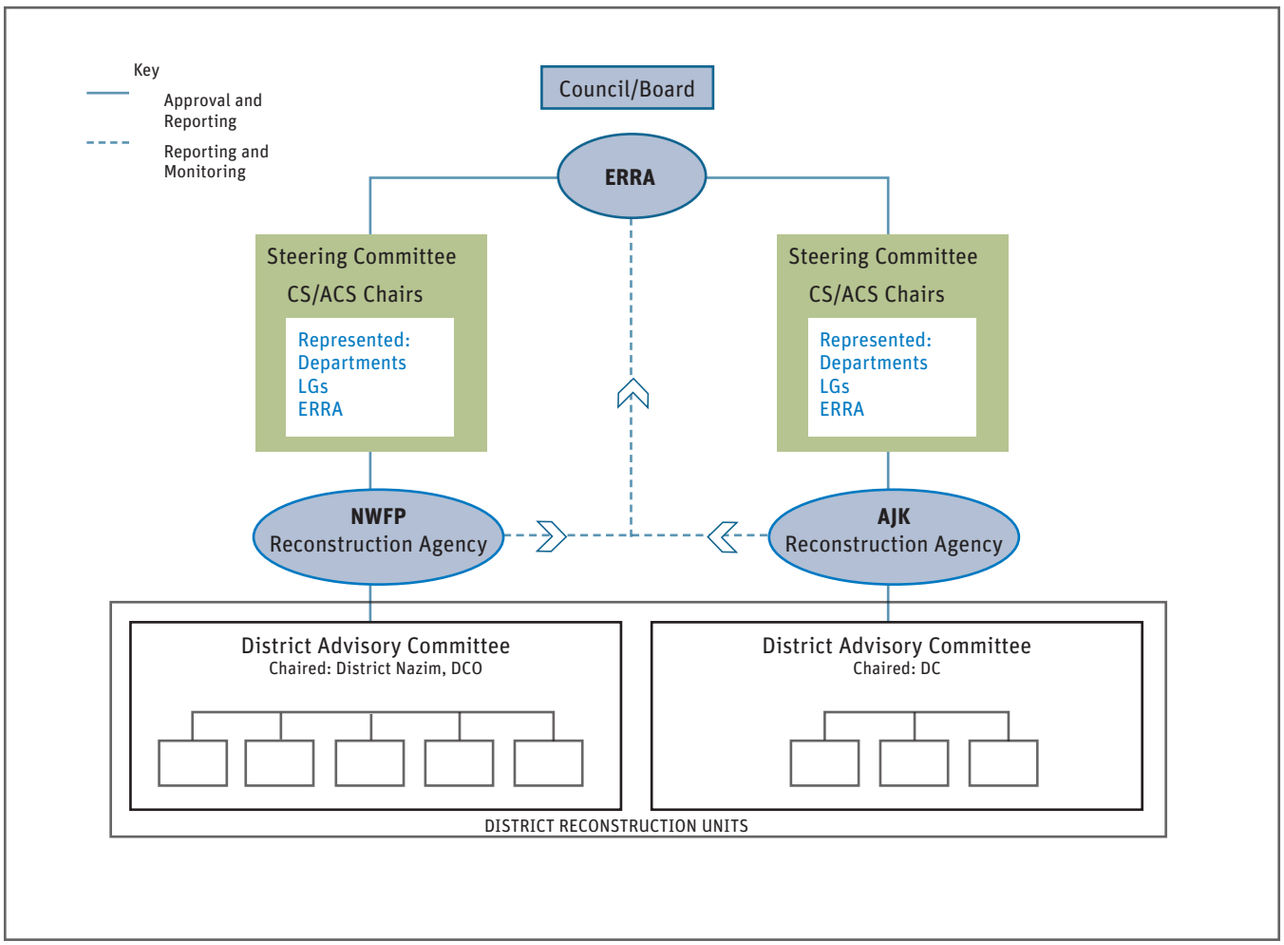
23. *Impetus for the centralization also came from the scope and pace of the reconstruction required.* Without a new agency, the option was to rely on existing line and development departments to spearhead reconstruction. Beyond the institutional inertia that would slow the shift from regular functioning to reconstruction, issues of requisite scale and pace suggested the need for a new, dedicated agency. Most line departments had no experience at constructing at this pace or magnitude. The education ministries of AJK and KPK, for example, were faced with responding to the destruction of 6,000 schools, a thousand-fold increase over their existing annual construction targets. In addition to this vastly expanded scale, there was a need

for brisk reconstruction. Affected communities were eager to have infrastructure and services restored. To meet these community needs, the restoration of lost services was prioritized. The relative institutional inability of line departments and developmental agencies to respond to such time-sensitive needs also contributed to the need for a new agency to manage reconstruction.

24. *ERRA's organization reflected its reconstruction priorities, and drew on the best practices recommended by the World Bank and the Asian Development Bank, which were later also documented in the Post-Disaster Needs Assessment published on November 12th, 2005.* Keeping the principle of decentralization and subsidiarity in mind, ERRA was organized to both ensure uniformity in reconstruction while devolving implementation. The government drew on the suggestions of the PDNA, to structure ERRA to be operational at the federal level, with regional and local offices to oversee implementation. With little precedence on constituting such a body, ERRA was represented either directly or through its affiliates at the federal, provincial/state and district level, the institutional apparatus was erected to govern an expanse of over the 30,000 square kilometres and nine districts of AJK and KPK affected by the earthquake.

25. *The ERRA Council, the apex body at ERRA, provided strategic policy oversight and ensured sustained financing.* At the top was the ERRA Council, headed by the Prime Minister, with the Deputy Chairman of ERRA as the secretary. Council members include the Prime Minister of AJK, the Chief Minister of KPK, the Minister for Kashmir Affairs and Northern Areas, the Finance Minister, and the Deputy Chairman of the Planning Commission. This council provided strategic directions in matters of policy formulation and ensured adequate funding.

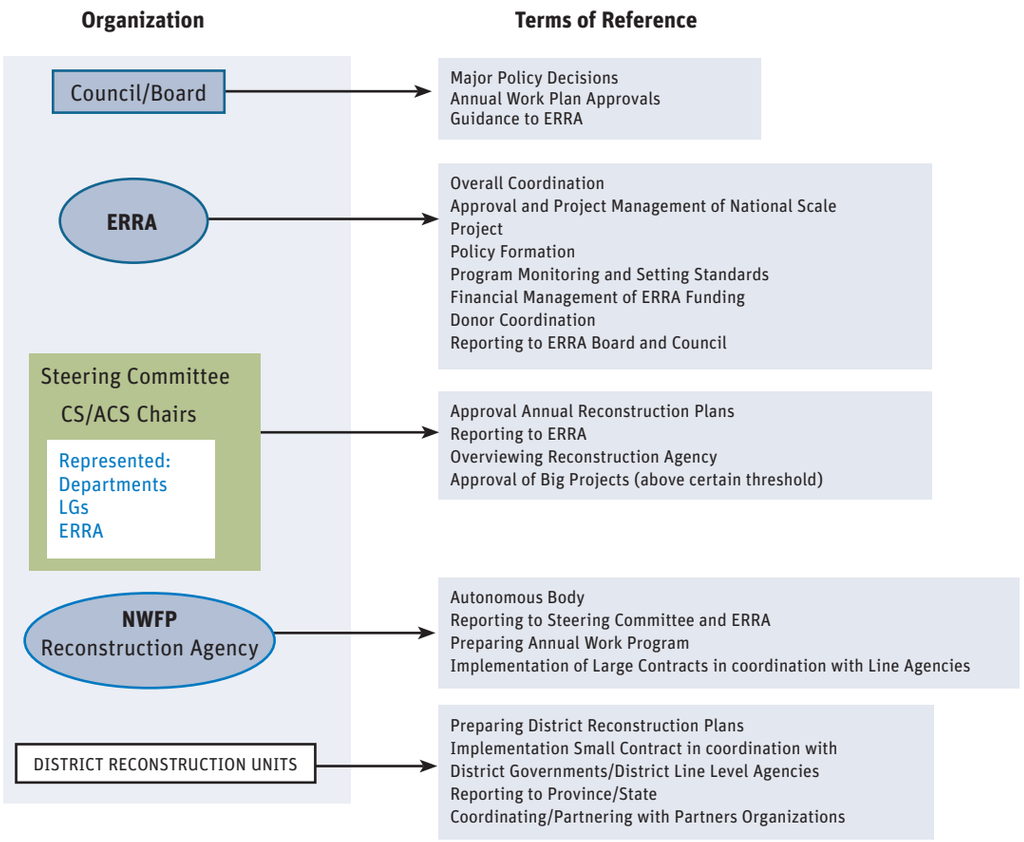
26. *Next in hierarchy was the ERRA Board which ensured implementation of approved policy decisions and developed and implemented annual plans, programs, projects and schemes.* The Board was headed by Chairman ERRA with the Deputy Chairman ERRA as a member and the secretary. Other members included the Chief Secretary AJK, the Chief Secretary KPK, Additional Finance Secretary Expenditure, a representative from the Ministry of Defense, Additional Secretary Planning Division, Additional Secretary Economic Affairs Division, and six representatives from civil society. The stature and access to power of the members of the ERRA Board and the ERRA Council contributed to the organization's credibility.



27. *This bifurcation of policy planning and approval (the responsibility of the ERRA Council), and programmatic planning and implementation (the responsibility of the ERRA Board) was replicated at the lower levels.* At the provincial and state levels, the Provincial Steering Committee was coupled with the Provincial Earthquake Reconstruction and Rehabilitation Authority (PERRA), and the State Steering Committee was coupled with the State Earthquake Reconstruction and Rehabilitation Authority (SERRA). Similarly, at the district level, the District Reconstruction Advisory Committees provided work-plan oversight to the District Reconstruction Units which designed programmatic interventions.

28. *ERRA staffing profile provided another form of ensuring widespread ownership of the organization's mandate and policies.* Instituted as a hybrid organization, ERRA's staff was comprised of civil servants from federal, state and provincial governments, armed forces personnel, civil society, and international/national consultants. ERRA could draw upon both international experience of expert consultants and sector specific experience of the line ministries. Utilizing the best talent from existing agencies, supplemented by the periodic hiring of international experts, allowed for the dynamic management of recovery. The mix of personnel from diverse backgrounds also presents opportunities for knowledge sharing and encouraging innovation. The army provided mass and speed, bureaucrats provided guidance on the rules and procedures, and international/national consultants and civil society monitored implementation and ensured the quality of technical outputs.

29. *ERRA's focus on central policy-making also contributed to keeping the organization mission-focused.* In a political environment with changing governments that brought new priorities, ERRA was able to prevent changes in its mission. It achieved this by fending off



new political interests through invoking its institutional policy approval mechanism. When a new political entity would attempt to influence ERRA to shift its focus—for example, regionally, or sectorally—the organization would invoke its policy approval mechanism, a joint process managed by the ERRA board, as the sole means of reconfiguring organizational mission.

30. *ERRA was also careful to build on the institutional groundwork laid during the relief and early recovery periods. ERRA subsumed the staff of the relief and early-recovery organizations, thereby gaining their institutional knowledge, as well as the community relationships and goodwill they had cultivated*. Relief efforts led by the Federal Relief Commission (FRC),

The Inclusion of Line Departments to Ensure Sustainable Reconstruction

At first, given ERRA's reconstruction model, line department were excluded from reconstruction activities. However, as reconstruction progressed, it became increasingly clear that sustainable build back better policies required line department support once ERRA's work was done.

Line Departments would have to be prepared to spend for the extra resources to support for the additional costs. ERRA agreed to provide for the additional resources for three years, with the agreement that within that period the provincial and state governments would advertise, hire, and budget for these additional costs.

Early Development of Reconstruction Strategy Contributed to a Successful Donor Conference

The success of the Donor Conference was seen as a result of an early and well-crafted strategy for implementation that allayed frequent donor concerns of financial transparency and an emphasis on sustainable reconstruction.

Of particular note were five aspects of the government's presentation at the Donor conference:

- Implementation plan: Based on the PDNA, the government identified the sectors that required reconstruction.
- Implementation arrangements: once again using the PDNA, which suggested the establishment of federal and district level organizations for implementation, the government outlined its strategy for implementing reconstruction.
- Coordination arrangements: Given the scale of reconstruction required, care was taken to address how reconstruction would be sensitive to coordination requirements. This was of particular import to donors, who typically face challenges in coordinating with governments during reconstruction.
- Incorporation of DRR in recovery: Disaster Risk Reduction was established early as one of the key guiding principles in recovery, with the reconstruction planning presented at the Donor Conference organized around this principle.
- Fiduciary safeguards: Clear and transparent mechanism for tracking funds were outlined at the conference.

built initial contact and lines of informal communication with the affected communities. As the sole agency overseeing recovery, FRC benefitted from the immediate and deep connections with the affected populations built by the many small and large implementers executing relief work in affected locales. In March of 2006, while FRC's work was still continuing, the government recognized the need for continuity from across relief and reconstruction and subsumed the organization within ERRA. FRC's independent status was dissolved, and residual relief work delegated to ERRA. This not only afforded ERRA the institutional knowledge of FRC's staff , allowing ERRA to best align relief projects with reconstruction objectives, it also ensured that the reconstruction agency retained the connections with the community that were essential for sustained and productive community feedback on reconstruction activities.

31. *Early Recovery, co-led by ERRA and UNDP, initiated virtually contemporaneously with relief work, and also in close communication with affected populations, built similar relationships*. ERRA's close work with the UN on Early Recovery meant that the former's staff not only had the benefit of being familiar with Early Recovery efforts, but as with relief, could ensure efficient and informed utilization of resources across the two efforts. And, as with FRC, while Early Recovery was still being implemented, ERRA subsumed its work entirely to ensure the greatest possible institutional continuity.

Recovery Financing and Financial Management

32. As detailed earlier, the success of the donor conference was attributed to the comprehensive planning and the funding channels set up immediately after the earthquake, which instilled confidence in donors, and encouraged international involvement. This efficacy in planning and institutionalization of systems to manage recovery was due in large part to the involvement and endorsement of the highest tier of the political leadership from the early stages of the post-disaster response.

33. Funds were in the form of USD 2.5 billion in grants and USD 4 billion in loans. The largest bilateral donors were Saudi Arabia ($593 million in grants and soft loans), the U.S. ($510 million in grant and in-kind assistance), China ($320 million in grants and loans), Iran ($200 million credit line), and the United Arab Emirates ($200 million in grants). Among multilateral lenders, the World Bank pledged $1 billion in soft loans; the Asian Development Bank $1 billion in grants and loans; and the Islamic Development Bank $500 million in soft loans.

34. *Anticipating the complexity of recovery financing, ERRA was also established as a means of streamlining the financial aspects of reconstruction. Fiduciary concerns provided an additional impetus for a single institution to manage recovery*. Faced with the fungibility of monies in the financial systems of regional governments, the reconstruction effort ran the risk of reconstruction funds being diverted towards non-recovery efforts. This risk was made particularly acute by the unavailability of any clear or reliable method of monitoring financial flows within regional governments. A single funding line was seen as a solution, and a single centralizing institution provided an apropos vehicle for the solution. This line of funding was to be independent and more robust, with the stipulation that no funds ear-marked for the reconstruction agency could be reassigned to another agency.

35. *At the program design level, a tri-tiered planning and project approval structure was developed. Each tier was bifurcated to ensure a balance between uniformity in policy and devolution in program implementation*. At the lowest level, District Reconstruction Units were empowered to design projects with an estimated cost of up to Rs. 100 Million, and with a territorial scope limited to that district. These designs were submitted for the approval of the District Reconstruction Advisory Committees, which ensured compliance to centrally set guidelines. For projects that exceeded either that financial ceiling (but were less than Rs. 250 Million), or spanned more than one district, the Provincial or State authorities, PERRA and SERRA, would design work plans for the approval of their respective Steering Committees. Projects exceeding that amount, and up to Rs. 1,000 Million, required approval at the highest tier, and were designed federally by ERRA and approved by the ERRA Board. This method of bifurcating program design and policy oversight ensured that while at the programmatic level, decisions were made as close to the ground as possible, policy uniformity was maintained across the many reconstruction programs being implemented.

36. *The decentralization of implementation and financial decisions was also practiced as a form of ownership-building. However, feedback and advice solicitation alone, it was recognized, could not build the effective and widespread ownership that would make the centralized organization's initiatives successful*. The devolution of financial responsibility was also essential. Thus, ERRA created a tiered financial independence system, providing individual programs (and thereby individual implementing agencies and affected populations communities) independence over the choice of initiatives to implement. At the lowest level, District Reconstruction Advisory Teams were given authority to approve DRU-designed projects. The Provincial and State Steering Committees were given authority to approve projects prepared by their respective reconstruction authorities (PERRA and SERRA). Together, control over programmatic interventions and financial independence were instituted to build widespread ownership.

37. *Centralized policy-setting and program design were practiced alongside financial and implementation independence to balance decentralization with uniformity in reconstruction*. Although latitude in financial manage-

ment engendered ownership, it also introduced the risk of project divergence: the many local implementers, and the provincial and district reconstruction units, it was worried, would use their money to fund interventions that provided varying benefits. This would lead to perceptions of unequal assistance and ill-planned reconstruction. As a means of mitigating that risk, ERRA enforced its policy of centralized standard setting and program design. While the choice of which programs to implement was left to decentralized bodies, the nature of the programs, the method of prioritization, and their modalities of implementation were required to conform to centrally managed ERRA standards.

Implementation Arrangements and Recovery Management

38. *Policy and program development continued well into the implementation process of recovery and was periodically informed by several kinds of post-PDNA surveys*. These surveys were conducted to assess the needs of those populations prioritized under the government's guiding principles. While the PDNA provided a good basis for initial reconstruction needs estimates, it needed to be complemented with more in depth knowledge of the needs of the affected communities. Subsequently, comprehensive and consultative assessments were conducted by ERRA for programmatic planning. Some of the guiding principles that emerged pertained specifically to implementation issues, as described in the adjacent table.

39. *The centralization of recovery functions in ERRA however created the risk of partner disengagement. ERRA mitigated this risk through a variety of ownership building measures that were instituted as policy in ERRA's organizational and implementation procedures*. This centralization of virtually all reconstruction activities into ERRA introduced the related problem of disengagement with partners, implementers, stakeholders, and affected communities. The collapsing of the work and responsibilities of multiple, disparate agencies spread across several non-governmental organizations and two governments into a single organization, ERRA, created the acute need to disseminate ownership of ERRA's policies.

40. *At the highest levels of consultation and ownership building, the ERRA Board included the chief ministers of the two governments as secretaries, and all policy decisions were made with their consultation and approval*. This multi-layered consultative process was institutionalized to engender ownership across the wide range of stakeholders. The requirement for ownership-building in mind, ERRA institutionalized several tiers of building ownership. At the local level, village reconstruction teams encouraged ownership among affected communities via every-day interaction between communities and on-the-ground implementers. A tier above, Technical Working Groups organized implementers to incorporate feedback with the aim of engendering ownership. Comparable structures of ownership-building existed in another higher tier, where stakeholders engaged in policy-oriented discussions.

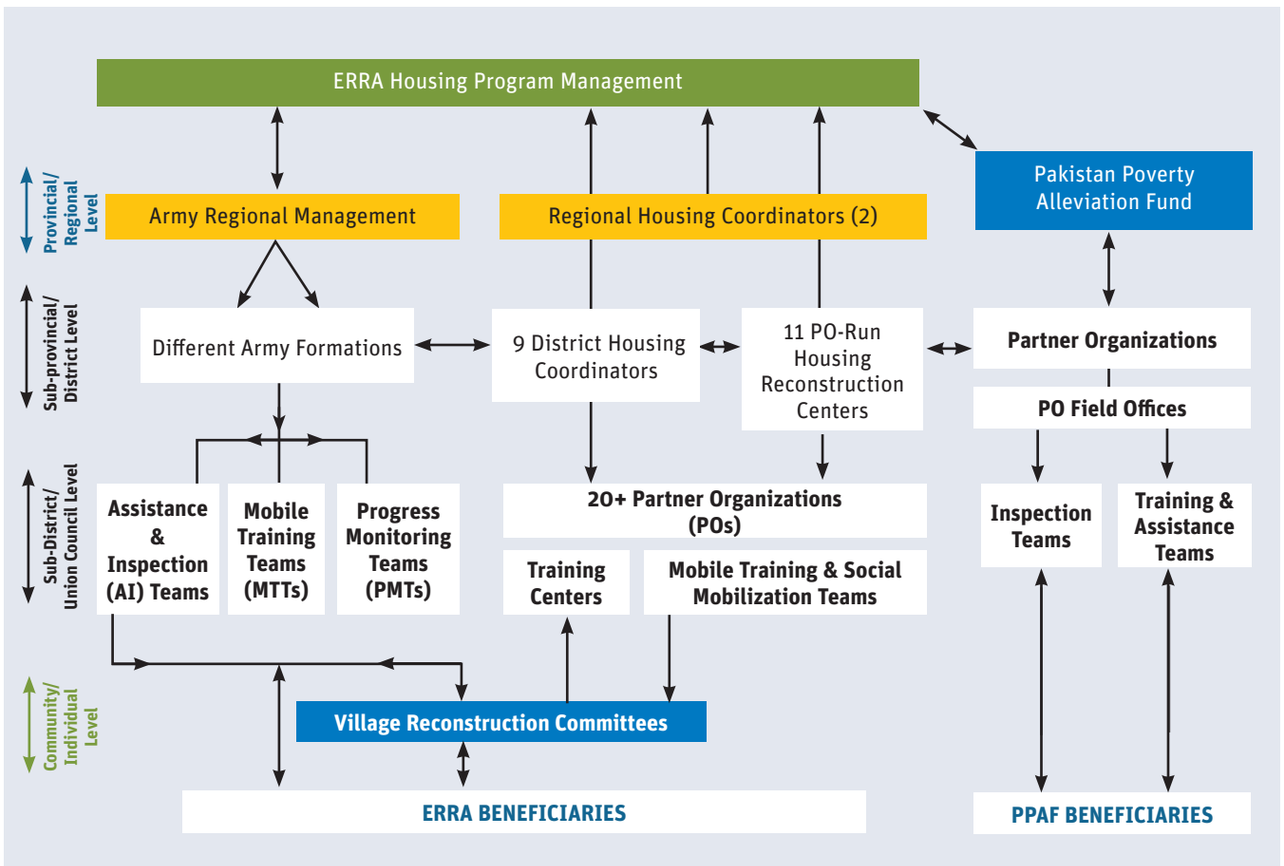
41. *Designing sectoral policies required input from both experts as well as from affected communities. ERRA's first consulted sector experts whose propositions were vetted against ground realities, and the final policy approved by ERRA at the federal level*. Policies were first designed by a technical team within ERRA with input from relevant international agencies (e.g. WHO for health), considering international best practices. These practices would then be contextualized to the Pakistani experience through a review process by the Technical Advisory Group, which existed for each of the twelve sectors, with each group comprised of experts from that sector. The plan would then be vetted by the implementers and the communities for their input. Once community and implementer feed-

Principles to Govern and Guide the Recovery Program

- Recovery program is based on needs and demand driven
- Support Earthquake Reconstruction and Rehabilitation Authority's (ERRA) mandate to oversee and monitor the overall reconstruction program
- Strengthening ownership of AJK and KPK without compromising implementation efficiency
- Complete reconstruction in the shortest possible time with high quality. Strive for economies of scale which attracts firms with good management practices
- Simplify and expedite approval and implementation procedures. Establish appropriate thresholds at District Reconstruction Unit (DRU), Reconstruction Agency (RA), and Steering Committee (SC) levels for approval of plans and contracts
- Reconstruction will conform to appropriate seismic safety, quality, technological, and environmental standards
- Strengthen long-term capacity building in reconstruction and hazard risk management

back was incorporated, the policy design would be presented to the ERRA Board, and then for the ERRA Council. However, this was a flexible implementation system, and feedback loops continually attenuated the program.

42. *Going from data collection to implementation in the rural housing reconstruction program, is by far the single largest program in ERRA's portfolio*. To begin, a detailed damage assessment and eligibility surveys were conducted to categorize housing units by the extent of damage, determine eligibility, and sign MOUs with the verified beneficiaries (quasi-legal agreement). The survey form and technical guidelines were developed under the Rural Housing Reconstruction Program. The information collected was used to develop beneficiary lists and to better target grant disbursements under the Temporary Shelter Support Program. Over 600 teams were formed and trained on the appropriate and consistent application of technical damage criteria. These teams conducted comprehensive door-to-door visits over a four-month period in all affected administrative units. This was followed by setting a mammoth implementation mechanism for meeting the housing program objectives of reconstructing or rehabilitating close to 600,000 houses to improved seismic resistant standards. To this effect, ERRA prepared a detailed operational manual that provided guidelines on all key aspects of implementation. Although beyond the immediate scope of this case study, a snapshot of the implementation arrangements put in place for this program is provided below, to illustrate the complexities that have to be overcome in the design and implementation of such large scale reconstruction programs.



43. *Similarly, a comprehensive targeted vulnerability survey made identification of vulnerable communities accessible to partners.* The Targeted Vulnerability Survey (TVS), funded by ADB and GoP, aimed to collect data on vulnerable communities in earthquake affected areas. Between 2007 and 2008, detailed information was collected on 432,130 vulnerable persons, including information on educational levels, employment status, skill development needs, disabilities, type of aid received, and income sources. The survey findings were made accessible to all stakeholders for project planning. This data was used to improve delivery of the International Catholic Migration Commission (ICMC) project to protect vulnerable people in 40 villages of districts Mansehra and Muzaffarabad. TVS data was also shared with the Benazir Income Support Programme (BISP).

44. *Identifying Women-Headed Households, the Landless, and the Virtually Landless.* As the first step to instituting a livelihood cash grant scheme, while prioritizing vulnerable communities and maintaining gender equality, a survey was carried out to identify and map the incidence of households headed by women. The focus on vulnerable communities also provided the basis for a survey of the extent and identification of the landless (those whose lands had been washed away by the mudslides caused by the earthquake) and the virtual landless (those whose lands were still intact and could be cultivated but had been rendered so unstable by the earthquake that no sustainable construction could take place on them).

45. *Surveys for Community Livelihood Rehabilitation:* In addition to assistance for the individual losses, there were communities for cash influx to prevent community collapse. Union Councils were taken as the unit for assessing the losses of public goods such as small irrigation channels, micro hydroelectric generators, and stream crossings; and each Union Council was provided Rs.750,000 for their activities. Consultations with these Union Councils provided the basis for translating guiding principles into programmatic interventions. Thus, the guiding principle of poverty reduction provided ERRA the opportunity to not just reconstruct to the pre-disaster status quo, but to introduce economic revitalization programs as part of its reconstruction activities. On the ground, this translated into the initiation of more profitable means of living in the affected communities, such as the cultivation of cash crops instead of subsistence farming.

46. *Streamlining Procurements: ERRA utilized the services of Pakistan Engineering Council (PEC) to expedite procurement processes.* PEC pre-approved and ranked contractors, simplifying the tendering process, as well as introducing transparency into the contractor selection process. Contractors formed a large part of the implementing bodies in the reconstruction effort. However, given the scale of tenders and responses to manage, a system was needed to streamline the contract-issuing process. For this purpose, ERRA utilized the services of Pakistan Engineering Council (PEC), a national government-organized body, which had a list of national and international contractors that had already been categorized by type of expertise and competence level. This list was used to prequalify some contractors for reconstruction. This not only helped expedite the process of issuing contracts, the institutionalized process of evaluating tender responses allowed ERRA to provide well-formulated answers to why a particular firm was chosen. Limit-

Tripartite Construction Contracts Ensured Oversight

Since the vast majority of the destroyed or damaged infrastructure was owned by the provincial and state government, dedicated Engineering Wings were created within these governments to work solely on reconstruction activities. These wings served as the government's representative, de jure "employers" of all construction contractors, with NESPAK signing as the "Engineer" designated to oversee construction in the tripartite contracts.

Construction contracts were thus signed by 1) the Engineering Wings as the "employers", 2) NESPAK as the "engineers", and 3) the construction company as the contracted party.

This arrangement not only ensured ERRA oversight of all construction, but also served to involve state and provincial governments in reconstruction

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ing tendering this way also eliminated the problem of dealing with inexperienced contractors that would severely underbid their more experienced competition to win contracts, but did not have the expertise or experience required to successfully perform the work. It also eliminated the associated problem of explaining to other tender competitors why they lost a contract to a relatively inexperienced firm.

47. *In addition to the need for rapid procurement, the mega-scale infrastructure reconstruction required an expert group that could rapidly and reliably provide oversight and advice in reconstruction*. Following soon after ERRA's establishment, the National Engineering Services Pakistan (NESPAK), a publically organized, independent group of engineers, were installed as General Consultants to the Authority to oversee construction & implementation. Their role was instrumental in the conduct of timely assessments of structural damages and geological hazards, and seismic mapping. NESPAK also oversaw and advised in the development of seismic resistance standards, the reconstruction plans for government, health and education buildings, as well as in the urban planning essential to town and village recovery.

48. *In addition to its role as the general consultant setting construction standards, and being instrumental in policy design, NESPAK's engineering expertise gave it the requisite skills to be the primary party responsible for project costing.* NESPAK's costing was combined with ERRA leadership reconstruction goals to develop yearly budget estimates. ERRA projected a standardized reconstruction rate for all its projects: each sector was to be built back at 33% in its first year of reconstruction, 33% in the next year, and 34% in the final year. Based on these targets, and adjusted to reflect the previous year's accomplishments, ERRA would submit a budget to the government prior to the passage of the federal government's budget. The strong support for the reconstruction effort among the political leadership meant that ERRA's budgetary needs were met entirely for the first three years of its work.

Government Construction Projects Competed

Typical of earthquakes, a majority of the reconstruction required in Pakistan's disaster centered on infrastructure. ERRA recognized the need for—but was unable to effectively accomplish—standardization of construction rates. While the government offered Rs. 2,000 per square foot of reconstruction to its contractors, other implementers, offered up to twice that amount, skewing the market towards projects being implemented by the higher paying agencies.

49. *After recovery progressed and began to address issues of development, implementation fatigue began to appear in some aspects of reconstruction*. Team spirit and motivation were high in the initial phases of reconstruction, resulting in quick delivery of high quality outputs. However, as invariably occurs, during subsequent years pace of implementation decreased. Once the reconstruction of key damaged and destroyed infrastructure had been completed, and reconstruction began to address issues of development policy, particularly urban development, the pace of recovery slowed and observable difference in delivery of outputs was observed.

Monitoring and Evaluation

50. *ERRA's Monitoring and Evaluation Wing was also established at the Authority's inception. This ensured early oversight mechanism and also contributed to a successful donor's conference by increasing confidence in the reconstruction effort*. In joint consultation with stakeholders, ERRA's M&E wing developed an evaluation framework. Its core principals included a focus on results and beneficiaries, lessons learning, transparency, and communication. The overall M&E system was established to enable ERRA and its partners to measure performance on all reconstruction projects undertaken by implementing organizations and agencies. The system supported project-level monitoring and provided independent analysis on overall progress strengthening accountability. It also ensured compliance with ERRA's directives and sectoral strategies, and improved responsiveness to identified problem areas.

51. ERRA adopted parallel systems of monitoring and evaluation, one internal and one external. The internal system consisted of detailed project level supervisions and the monitoring of recovery programs and projects by PERRA, SERRA, DRUs, line departments, partner organizations, and NESPAK. External monitoring was carried out by donor missions, institutional reviews, and annual evaluations. The accessibility of information provided under the M&E system improved project transparency, increasing stakeholder confidence in the recovery program.

52. *Internal monitoring of financial data included joint oversight by ERRA's M&E Wing and the program manager. The availability of implementation and financial data was made possible by the joint oversight of all projects by the ERRA's M&E Wing's audit department and the program manager. This structure helped ensure financial transparency, adherence to standards, as well as facilitated the involvement of the project management team in the oversight process*. Additional monitoring teams oversaw the technical aspects of reconstruction as well as the social impact of the reconstruction activity. The M&E Wing deployed two teams at the project level to oversee reconstruction. The Construction Monitoring Teams (CMTs) monitored technical aspects of both the inputs and outputs of reconstruction, ensuring compliance with centrally set standards for reconstruction. The Social Survey Teams (SSTs) assessed the social impact of reconstruction activities, providing feedback from the impacted communities to continually guide interventions. The teams began monitoring adherence to ERRA standards from the commencement of the project, where it ensured tenders were publicized in accordance with federal guidelines, and that procedural requirements were adhered to in tender evaluations. Monitoring continued through the lifecycle of projects, with teams overseeing progress along Key Performance Indicators (KPIs) that had been predefined with input from NESPAK. M&E teams would also make frequent site visits to ensure adherence to construction standards. M&E teams would verify and document findings by taking pictures of project sites. This information, once logged in the M&E system, was sent back to donors to ensure that there were constant corrections being made during reconstruction. In addition to alerting the donors of any missteps or lack of adherence to standards by the implementers, ERRA also asked implementers to correct their procedures on the spot.

Implementation Oversight by NESPAK

At the project planning stage, NESPAK was responsible for vetting the designs for infrastructure reconstruction to ensure compliance with seismic resistance and urban planning objectives. During project implementation, it was also responsible for supervision of several of these construction activities.

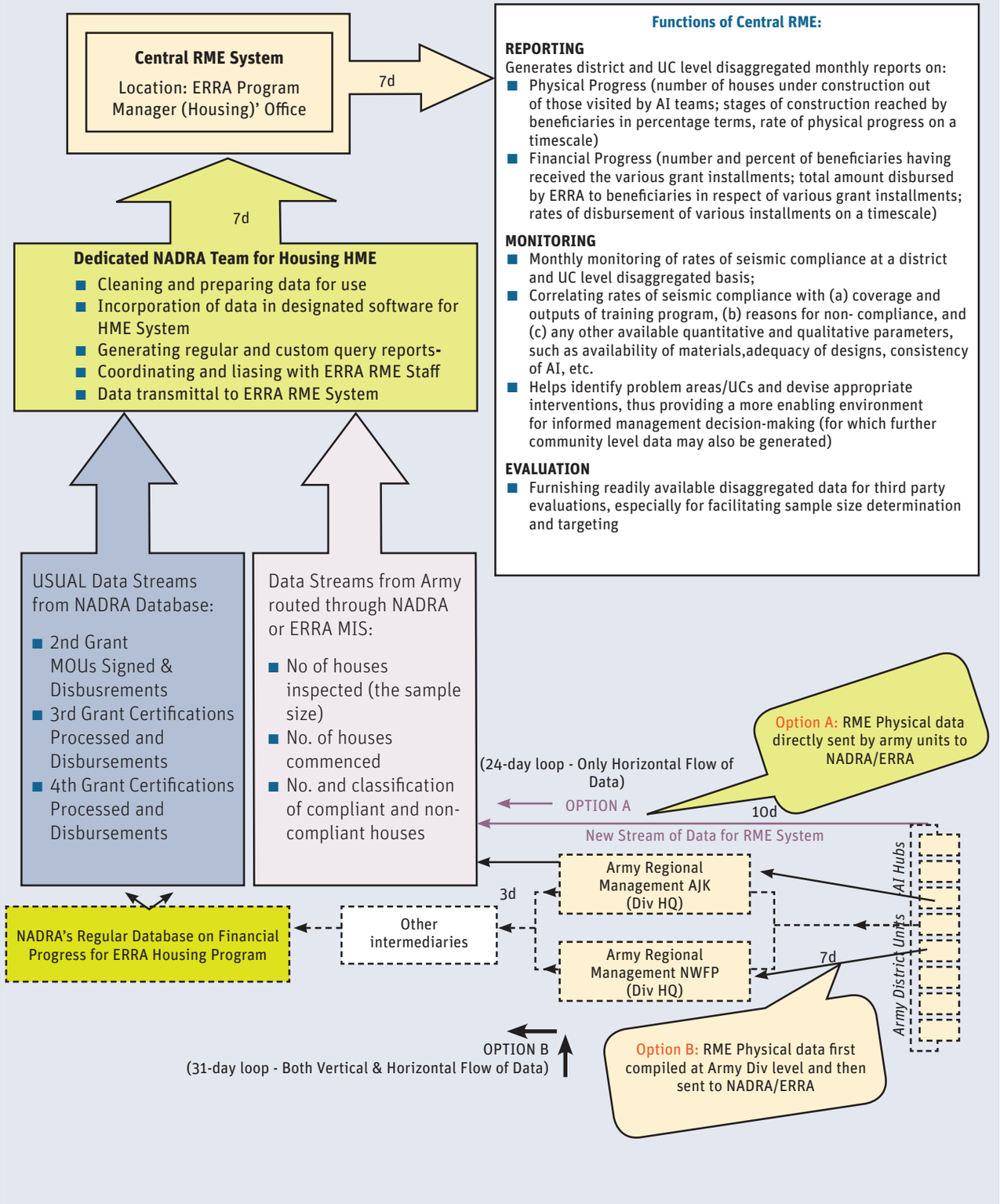
53. *The inclusion of individuals with expertise in procurement processes and M&E also ensured that all planned activities were continually being vetted for compliance to government regulations, and anticipated bottlenecks could be resolved in a timely fashion*. Maintaining flexibility in its implementation, ERRA instituted new mechanisms for program monitoring that maintained close links with affected communities as well as project implementers. As project implementation progressed, a capacity deficit for monitoring projects at the district level began to appear. This was particularly exacerbated by a parallel deficit in the abil-

ity to communicate project issues to other recovery actors. Given the scope of the recovery effort, and the breadth of stakeholders involved, Project Implementation Coordination Units (PICUs) were organized in September 2008 to bridge these capacity gaps. In this role, PICUs served a dual function of maintaining links with the affected communities, as well as ensuring that reconstruction progress remained on schedule. The units submitted regular progress reports to the relevant wings of ERRA, and suggested remedial measures where implementation was facing challenges. In this sense PICUs were an essential part of the program management machinery, maintaining informal links with the community, and having formal chains of command available to raise these issues with ERRA leadership.

54. *Establishment of a Dedicated Reporting, Monitoring, and Evaluation (RME) System for Rural Housing based in the Program Manager's office*. The system collected, collated, analyzed, and reported on disaggregated data on physical and financial progress and seismic compliance being received from Army regional offices, and national citizens' database (NADRA) and ERRA Management Information System (MIS) respectively. The system also obtained data streams from the Training MIS and ERRA M&E unit's building material supply and price monitoring mechanism. The RME had in-built query and monthly reporting options, and cross-tabulation capacity across the above variables and data streams. This enabled a much more effective and efficient monitoring of reconstruction trends, identification of problematic areas, and consequently more informed decision making and development of mitigation measures. These Monitoring and Evaluation mechanisms contributed to high project completion rates. Within 3 years of the earthquake, ERRA's flagship initiative, the Rural Housing Reconstruction program had been nearly completed. Of the houses constructed, a dramatic 96% were constructed to the new seismically resistant standards ERRA introduced.

55. *Similarly, at the 5-year mark, the Water and Sanitation sector saw the completion of 84% of all planned projects, with the remaining 16% under construction*. This sector's reconstruction, in line with the principle of build back better, introduced water quality improvement processes. Sectors such as Education and Health registered the slowest performance. A lack of contractors, as well as a lack of contractor expertise contributed to this slow rate of reconstruction. The education sector also suffered from sustainability issues as provincial and state governments, faced with a financial crunch, struggled to maintain the schools.

Schematic Illustration of Business Process for ERRA Housing RME Reporting, Monitoring, Evaluation



Grievance Redressal Mechanisms

56. *ERRA's flagship program of rural housing reconstruction also instituted a dedicated, low-cost, low- maintenance software-based grievance redress program.* Designed by ERRA, the Pakistan Army and AJK's SERRA, this detailed MIS system enabled ERRA to effectively track the disbursement of grant tranches. It also enabled ERRA to appropriately handle grievance cases related to various stages of construction through: the ability to search hundreds of thousands of individual records and their statuses; the rapid generation of correction lists; and the tracking of bank transactions and reconciliations. This brought down grievance correction and redressal times from 3 months to 10 days (by a factor of 8-10), and elimination of a backlog of around 37,000 grievance cases in AJK alone.

57. *ERRA also established twelve Data Resource Centers (DRCs) across the affected areas to handle grievances and act as information centers*. DRC managers were focal points for grievance-related issues and had the authority to update records after due verification. ERRA maintained real-time logs of all updates in order to guard against future inconsistencies. Additional Grievance Redress Committees (GRCs) were established at seven locations to enable wider cover.

Coordination and Communications

58. *Communication management was an integral part of ERRA's organizational structure serving to strengthen the organization's credibility. ERRA established a Knowledge Management Cell (KMC) and a media wing to document experiences and lessons learning, facilitate knowledge sharing, and to aid in communications.* The KMC strengthened ERRA's communication networks, developed an institutional library, stored information on district profiling. The media wing also undertook and published annual reviews, corporate brochures, and case studies aiding in the identification of problem areas and supporting course corrections. Press reporting was also regularly analyzed to gauge public opinion on the recovery program. ERRA's effective communications strategy successfully served to raise its visibility and profile.

An Information Clearing House Could Have Attracted More Donors

As reconstruction activities began, the need for an information clearing house started to become apparent. The data collected by the multiple surveys was seen to be of great use in recovery planning, particularly in answering the data questions of donors and implementers. Consequently, the program manager of Social Protection was tasked with combining the datasets on vulnerable populations that had been collected (reference Guiding Principles). Had this information been available earlier in the reconstruction effort, it could also have been used to mobilize smaller donors who were otherwise put off by lack of ready transparency.

59. *Ownership among the largest donors was cultivated by assigning each major donor a sector in which they took the lead in reconstruction.* A 'G7-plus' group was established that included the 7 largest donors. This group met every month, and each one of these donors picked a sector in which they took the lead. The World Bank, for example, took the lead in housing, and the European Union spearheaded education sector reconstruction. This close involvement gave the donors a sense of ownership, as well as confidence in the reconstruction effort.

UNDP's TAMEER Project

The UNDP was actively involved in post-earthquake response from the first days of emergency rescue, making it intimately familiar with the disaster.

Recognizing that ERRA would need support in designing and implementing its mandate, UNDP established the Technical Assistance for Management of Earthquake Early Recovery (TAMEER) project in December 2005.

Set up initially with a 13-month horizon, TAMEER was extended to run for three years, providing capacity-building support to ERRA in defining the new institution's mandate; drawing up plans for reconstruction and rehabilitation; monitoring implementation, and ensuring effective communication among stakeholders.

60. *Allowing each of the largest donors to take the lead in a sector's reconstruction also proved beneficial for ERRA. The system provided an ongoing check on programmatic activities, since donors could draw upon their sectoral involvement to suggest policy adjustments.* This further served to boost donor confidence in the reconstruction process, and leading to smooth financial flows for ERRA.

61. *Although large donors were contributing amply, the need was recognized for the facilitation of smaller donors.* A dedicated Donor and Sponsor Wing was created within ERRA to facilitate contributions from smaller donors. While contributions from such donors are far smaller than institutional contributions, large volume compensated for their smaller size. Smaller donors were seen to be particularly less likely to contribute if they encountered multiple steps in the donation or sponsorship process. Thus, arising from this requirement, though not limited to dealing exclusively with smaller donors, the Donor and Sponsor Wing was created within ERRA which offered a single window for the facilitation of all of a potential donor's needs.

62. *High-level coordination across sectors and programs was greatly facilitated by daily coordination conferences.* Since programs were so closely tied to each

other, ERRA instituted a Morning Coordination Conference. Each morning the program managers, the individuals primarily responsible for programmatic planning and oversight of individual reconstruction initiatives would discuss mutually relevant updates. The conferences were often subject specific, with a program manager from a particular sector presenting on her work, leading to a lively discussion on the intersection of her work and those of other program managers. This mechanism was a key method of vetting program mechanics with the ERRA team, and often served to facilitate mid-course corrections.

63. *Training of Partner Organizations, Construction Artisans & Communities/Homeowners in Seismic Resistant Construction*. A very important element of ERRA's reconstruction program was its emphasis on building awareness and capacities for seismic resistant reconstruction. For example, a comprehensive 3-pronged training strategy and curriculum for seismic resistant reconstruction of houses was developed by ERRA, under which a cascade of training facilities were made available to all partner organizations, interested construction artisans in the affected districts, and the affected communities as well as homeowners. All recipients of such training were duly certified by the respective trainers, prior to the commencement of reconstruction activities. Grassroots partner organizations were made responsible for training functions such as providing guidance to affected communities in implementing the owner driven housing reconstruction program and in ensuring compliance with social and environmental risk safeguards.

Ensuring Communication for Successful Implementation of Guiding Principles

Communication was key to successful intra-sectoral prioritization, and it was observed that after the earthquake that a multitude of stakeholders commenced recovery efforts and programs with little coordination.

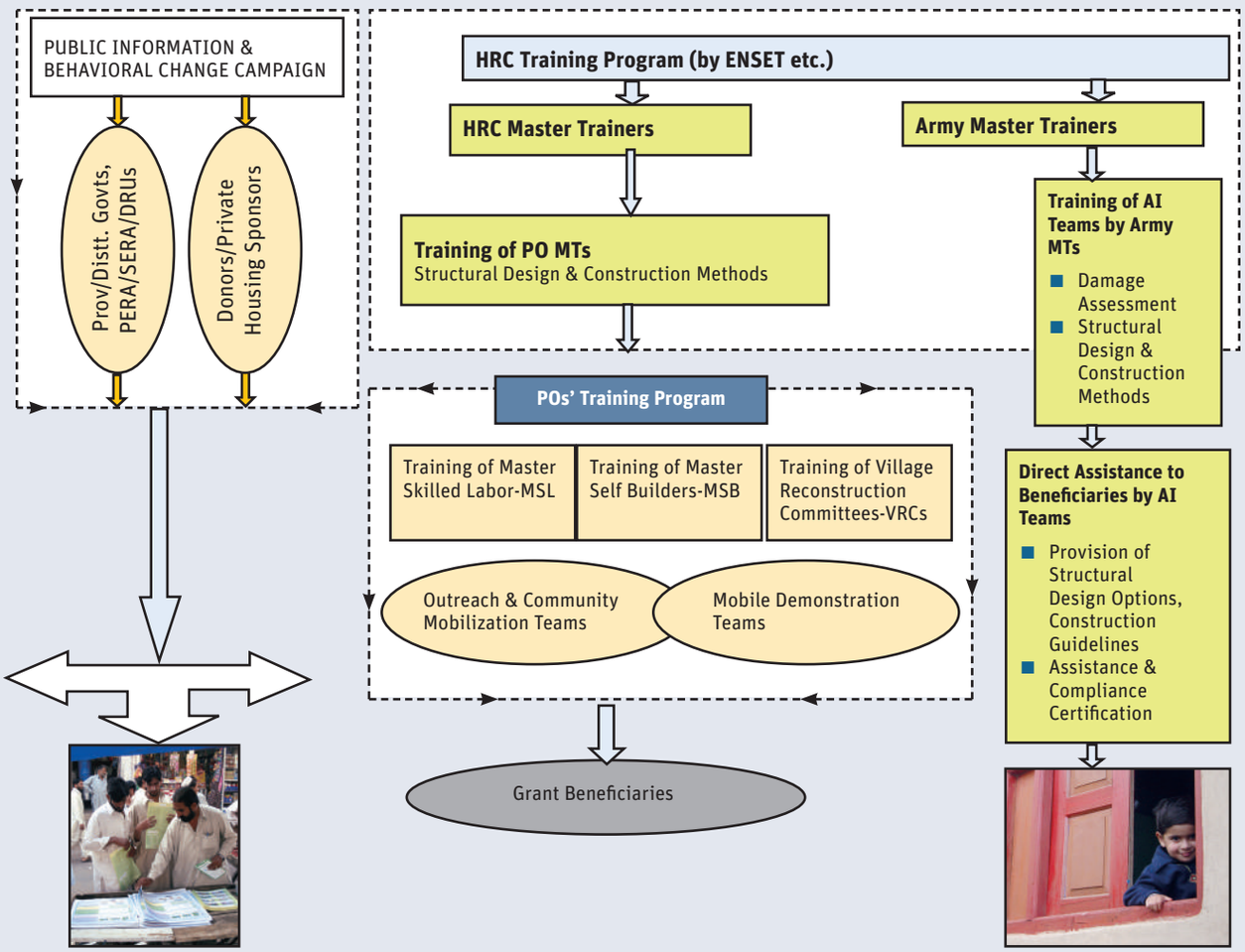
This led to an over-emphasis on the principle of accessibility.

With all implementers prioritizing reconstruction in accessible locations, less navigable areas were being entirely neglected. Reconstruction efforts in accessible areas were being duplicated at the cost of recovery in inaccessible areas.

A coordination mechanism was therefore put into place to avoid program duplication and ensure equitable resources were invested in all provinces, inclusive of rural and urban areas.

This mechanism ensured that all recovery effort needed approval of ERRA before being carried out, which could be cumbersome, but ensured comprehensive coverage of the entire affected area.

ANNEX -1: THREE-PRONGED APPROACH FOR INFORMATION SHARING AND TRAINING



Role of Leadership and Effective Crisis Management

64. *Strong leadership within ERRA was a key reason for the success of post-earthquake reconstruction. While Pakistan has incurred many high intensity natural disasters before and after the 2005 earthquake, none of the recovery responses by the public sector have come close to matching the uniquely successful 2005 reconstruction program*. A main reason for this success was robust leadership within ERRA, as well as strong political support for the organization from the highest tiers of political leadership.

65. *Close cooperation between the civilian and military branches of government were also a factor in the success of the reconstruction operation*. The appointment of military personnel at the head of ERRA assisted in ensuring close civil-military coordination. In particular, the appointment of a high-ranking member of the country's armed forces as the Deputy Chief of ERRA, the de facto chief executive of the organization, greatly facilitated civilian-military coordination.

66. *ERRA also benefitted from strong support from high-level political leadership. Indeed, the single most important factor identified by many studies of the success of the reconstruction experience was that project and programme leadership cultivated at the highest levels of government*. From the moment of its institutional inauguration, ERRA as an institution benefitted from strong political support, with the President's office providing particularly strident support. This high-level backing gave the institution powerful political clout. This political backing was also instrumental in overcoming the institutional resistance ERRA faced from the well-established line ministries and departments as well as the absence of subsidiary rules and procedures which led to problems in staff recruitment and procurements. It also helped alleviate institutional resistance to ERRA, particularly that which centered around its special financing mechanisms.

Strong Leadership was Critical in Providing Livelihoods Assistance to Vulnerable Families

Based on a review of international good practices, ERRA opted to launch a livelihoods cash assistance programs which provided unconditional monthly cash transfers to deserving affected families. US $85 million was disbursed to 268,000 deserving families.

Despite initial setbacks and criticism that such a program was a dole-out and created dependency on public support. However international literature also suggested that while it was important to 'take out the relief crutches', economic restoration was not immediately possible and hence families who were below the poverty line, or had lost their breadwinners or suffered life crippling injuries, or were female-headed households, were eligible to be provided income support in the first six months.

In the long run, post program evaluations showed how this program was extremely beneficial in averting another man-made disaster after the first natural disaster, in sustaining poor families in that rough period, and allowed them to gradually find a more sustainable means of livelihood.

67. The change in political leadership created a change in political priorities, impacting the pace of reconstruction. During the initial years of reconstruction, with strong political ownership and commitment at the national level, and full backing of the national leadership, ERRA was able to requisition quality staff, obtain requisite financial resources and exercise the authority to take quick decisions without having to go through the usual bureaucratic bottlenecks. However, the change in government in 2008 brought in new priorities. This caused a decrease in support for the reconstruction effort, impacting ERRA's ability to expediently resolve potential delays.

BBB in Housing Reconstruction was a Result of Strong Leadership by ERRA

Housing Reconstruction and Building Back Better. ERRA faced a formidable challenge in convincing the public to forego speedy reconstruction of homes and traditional ways of construction in favor of more resilient reconstruction which could withstand future earthquakes.

Despite demands for a lump-sum payment of the housing subsidy in one go, ERRA leadership implemented the principle of building back better, by devising the public subsidy program around conditional and incremental cash transfers. The payment of grant installments was subject to the houses, constructed through a homeowner driven model, to people meeting the seismic compliance requirements set by the government. There was huge hue and cry from various quarters on this arrangement, and many issues arose with maintaining reasonable rates of compliance, but ERRA leadership most commendably withstood this period in a calm and calculating manner.

Various facilitation measures of gigantic proportions were put in place to provide an enabling environment for people to comply with the building back better standards put in place by the government. Teams were provided constant encouragement and motivation to repeatedly extend reach out to the 600,000 families scattered over this largely inaccessible areas, while communities often perched on mountain cliffs well beyond the snowline or buried in deep and dark mountain gorges and ravines. *The results proved the program a resounding success: an over 90% rate of seismic compliance was achieved and more than that, the seeds for a culture of seismic compliant reconstruction were sown in the entire affected area*.

Recommendations for Institutionalizing the Learnings of the Post-Earthquake Reconstruction Experience in the Government System

68. *The recommendations included in this section provide a guide for steps that can be taken to institutionalize the learnings of the 2005 earthquake experience into NDMA policy and the wider government system*. The success of the 2005 program can be used to develop not only ex-post best practices, but can also inform ex-ante preparatory work to contribute to disaster risk reduction. This final step of the institutionalization of recovery best practices, learned from the 2005 experience, can help guide future recovery efforts under NDMA.

69. *Ex-Ante Institutionalization of Recovery can help Ensure Integration of DRR:* Among the central learnings from the earthquake of 2005 was the need to be ready for disasters. Being prepared for a disaster helps deliver good recovery. Knowing risks and vulnerabilities, Pakistan can put in place policies, standards, and institutional arrangement for managing recovery before a disaster strikes. The establishment of NDMA has been a key step in this regard. By giving NDMA the lead in disaster management in all stages following the disaster, the lessons learned about the need to maintain continuity from relief to reconstruction can be introduced across the spectrum of post-disaster activities. This will require formalized and predictable strategic and resource commitments towards recovery planning, implementation and performance management. Successful recovery will further require sustained national ownership and development cooperation for maintaining traction and momentum on recovery.

70. *Development of national policy standards for informing and guiding disaster recovery strategies: The emergence of a more conducive national policy environment for recovery strategy-formulation, planning and implementation holds the key to building recovery-led resilience*. Pakistan has made strides in developing national policy standards as a result of the 2005

earthquake recovery experience. It can build on this by developing common standards for all future recovery endeavors by consolidating past country experiences, existing legal provisions and contemporary international practices. Developing these standards and guidelines ex-ante can greatly contribute towards the development of successful recovery strategies in the chaotic ex-post environment.

71. *Maintaining a strategic and institutional continuum between preparedness, recovery and prevention is essential for the efficiency of future recovery efforts*. Future disaster recovery can be made more efficient and effective in contributing towards longer term risk reduction by: (a) overcoming the inherent shortcomings of institutions and governance structures in treating recovery as a 'developmental urgency', and; (b) improving coordination and strategic harmony across various national and subnational tiers of government and across recovery and regular development institutions. The establishment of NDMA with a strong institutional mandate for all three of these functions sets the stage for operationalizing and streamlining the links between preparedness, recovery and prevention.

72. *Ex-Post Development of National Recovery Frameworks can help ensure DRR in recovery*. As we see emerging clearly from the post-earthquake experience, recovery offers a unique window of opportunity to reduce future risk. People are more aware of risk, politicians are more motivated, and the funds are often available. Developing recovery frameworks at that time will help bring multiple stakeholders and their competing or diverging priorities to one common and inclusive platform for recovery strategy development, planning and project development. These can also: (a) help make recovery inclusive and resilient, and (b) increase the likelihood of the gains from the recovery process becoming sustainable and translatable into resilient development. In this regard, NDMA and its lower-tier offices could play a major positive role by developing national, subnational or local recovery frameworks, as necessitated by a particular disaster, as a means of ensuring the systematic integration of DRR in recovery planning and implementation processes.

73. *Importantly, is should be recognized that such a Recovery Framework would not replace a PDNA or other post-disaster assessment*. The Recovery Framework is developed in a manner that it would follow PDNA, and would elaborate the findings of PDNA.

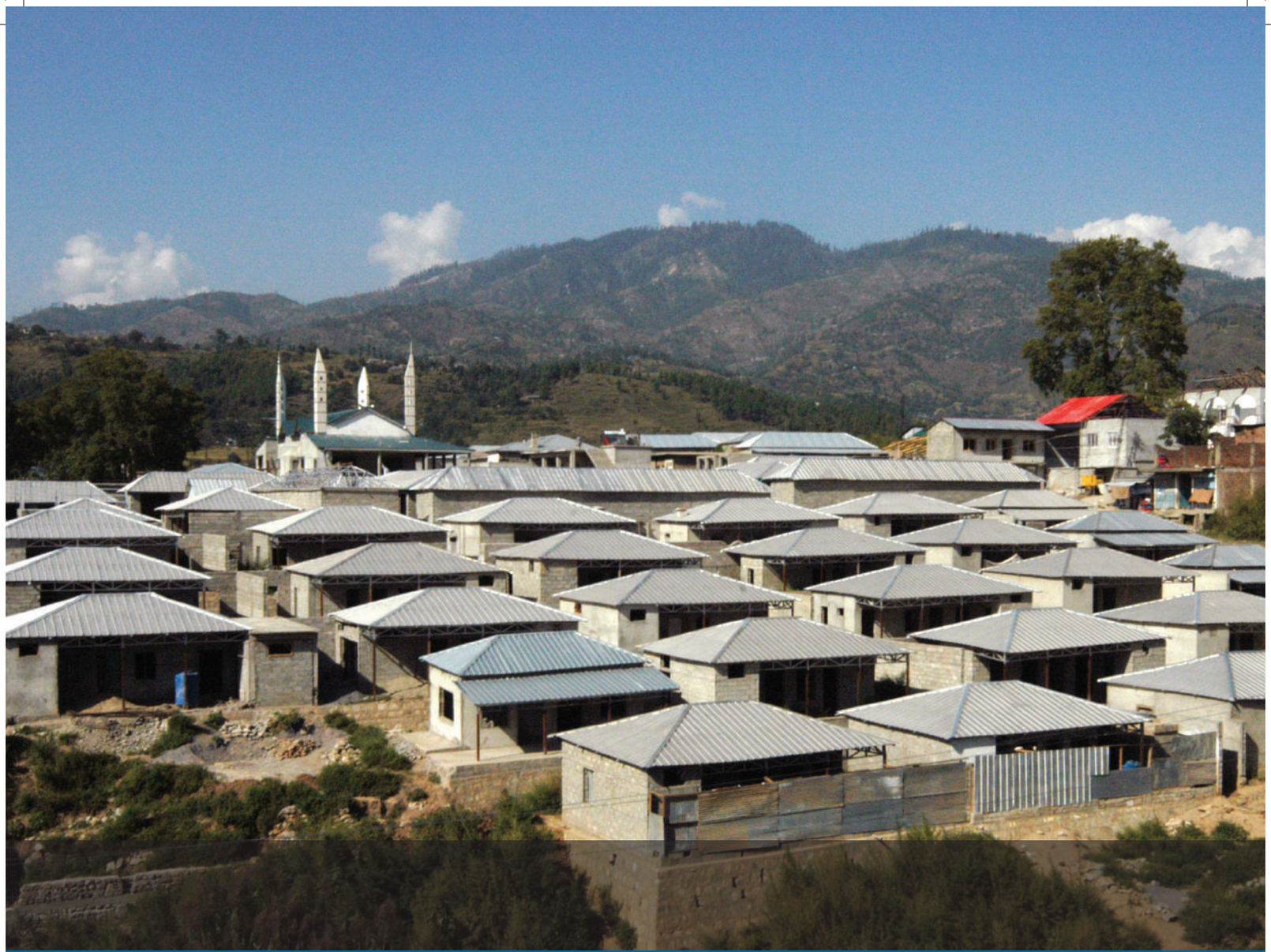
74. *Recovery Management and Monitoring*. There is a need for: (a) establishing quality control and enforcement mechanisms for the implementation of recovery, (b) building capacities of national, subnational and local governments in the design and implementation of BBB-based resilient recovery interventions, and (c) developing recovery program monitoring and evaluation systems, including tangible indicators of the integration of DRR in recovery. The latter includes the development and institutionalization of actionable and measurable indicators to monitor progress of implementation and achievement of recovery goals. Finally, governance and accountability systems should be put in place that permit greater accountability between government, the affected population, and the general public on recovery issues.

A Snapshot of Good Practices and Lessons Learned

- With a large scale, multi-jurisdictional disaster such as Pakistan's 2005 earthquake, a "business as usual" approach must be adapted for the extraordinary circumstances. Dedicated institutions, with legal mandate and political backing are necessary to implement successful recovery.
- In such large scale disasters, the most viable institutional option may be to consolidate reconstruction into one agency that provides oversight, a single point of coordination for national and international stakeholders, and adds additional capacity to implement and expedite reconstruction projects. However in such a model, multi-agency and multi-tier inclusion of public and private stakeholders is to be ensured and implementation responsibilities have to be delegated to sub-national, or district and municipal levels.
- As noted above, decentralization in implementation should be followed. However, this should be balanced with processes to ensure centralization in order to ensure uniformity in reconstruction priorities and policies across jurisdictions and programs.
- Such agencies must also be accompanied by a clear exit and transitional strategy and sunset clause that is triggered: (a) upon either the substantial achievement of major reconstruction targets, or (b) even earlier, if such an institution is only meant to provide an initial impetus for the reconstruction program to firmly take root and once the reconstruction program is on the path of effective and efficient delivery, in accordance with jointly agreed vision for reconstruction that a post disaster country formulates.
- A clear legislative mandate is essential for any institution tasked with overseeing reconstruction after a natural disaster. Whether existing legislation is amended, new legislation is introduced or a mandate is created through ordinances and government orders, it should clearly codify the functions and authorities

of the implementing institution. This mandate can also enable the establishment of a dissolution date or sunset clause for the institution so responsibility for national development can return to established institutions as they were pre-disaster.

- In keeping with the principle of decentralization, provincial/local level reconstruction agencies should take the lead in the post-disaster reconstruction following localized, provincial level disaster events. Keeping in view the scale of disaster, necessary support should be provided by the national level reconstruction body.
- Post-disaster reconstruction should be utilized as an opportunity to overcome pre-disaster gaps and shortcomings, and to introduce disaster risk reduction.
- Similarly, by linking post-disaster reconstruction to broader sectoral programs and priorities, recovery should be used as a means of furthering development goals.
- A focus on livelihood generation, particularly for vulnerable groups, is a key means of sustaining local economy. Cash grants, by providing cash injections into the economy, are a good means of assisting in livelihood support.
- Detailed assessments conducted after the PDNA help inform policies and constitute a vulnerability mapping exercise that can assist future reconstruction projects, and longer term developmental planning.
- A focus on improved access to services as well as service delivery should go hand-in-hand with infrastructure reconstruction. Sectors such as education, health and water and sanitation should be given equal attention alongside transport and housing reconstruction.
- Multi-hazard risk factors should be considered in design and implementation, including seismic, landslide and flooding risks.
- Recovery work can be assisted by the formation of village-level reconstruction committees, and through the expansion of the network of community based organizations.
- Coordination between the public sector and civil society organizations is essential for success. Appropriate coordination mechanisms should be institutionalized rather than leaving them to ad-hoc arrangements.
- The early development of a holistic prioritization strategy can help in the planning of a recovery strategy that ensures that overall reconstruction priorities are reflected across the many reconstruction programs.
- The inclusion of international experts in the development of priorities can be beneficial. They can provide both sector-specific expertise as well as draw on other recovery experiences to recommend best practices.
- Early recovery planning can greatly impact the success of the donor conference. Presenting donors with a recovery plan that includes institutional arrangements and monitoring and evaluation procedures increases donor confidence, having a positive impact on contributions.
- Mechanisms for speedy procurement, as well as streamlined and transparent tendering and contract award processes are essential in reconstruction.
- Joint oversight mechanisms are useful for ensuring financial transparency, and contribute to donor confidence.
- Robust internal monitoring and evaluation systems can function as ‘eyes and ears’ for reconstruction managers, and external technical audits serve to increase donor and public confidence.
- Local feedback and inclusiveness assists in service delivery, standard setting, and in M&E evaluations.



The DRF Guide will complement the Post Disaster Needs Assessment (PDNA) by using its outputs to help governments develop comprehensive, integrated, multi-sectoral recovery plans and management strategies. The DRF Guide addresses key elements such as: (a) Institutional framework for recovery; (b) Policy making and planning for recovery programs; (c) Costing and financing recovery programs, and; (d) Managing recovery and monitoring the delivery of results. Over time, the DRF is intended help improve government readiness for disaster recovery. By following the Guide, disaster recovery will be seen not as a short-term, remedial response, but an opportunity to build resilience and contribute to long-term development.

The Guide is being developed as a completely practice-based tool with input from: (a) an International Advisory Group (IAG), composed of senior international experts with first-hand recovery management experience; (b) a Technical Working Group (TWG), including professionals from the World Bank, UNDP, EU, and other stakeholder partners with practical expertise in various aspects of recovery, and; (c) a series of national-level and thematic case studies that will synthesize various global recovery experiences. The stakeholder engagement process encourages government officials, civil society organizations, and private sector entities familiar with large-scale recovery efforts, to collaborate in the development and dissemination of the DRF Guide. The DRF Guide is scheduled to be launched at the Second World Reconstruction Conference.

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