



National Guidelines for Recovery and Reconstruction

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Overview

Chapter 1. Overview

This guidance document aims to assist Indian States in planning and implementing post-disaster recovery and reconstruction programmes. It focuses on guiding principles, financing instruments and mechanisms, and practical considerations in implementing key recovery interventions and their monitoring and evaluation.

With its diverse geographical terrain and climate, India is vulnerable to numerous geological and hydro-meteorological hazards such as earthquakes, floods, landslides, cyclones, droughts, extreme heat waves, lightning, and wildfires. More recently, climate variability has caused the frequency, intensity and duration of weather-related disasters to increase. Such increases in intensity and frequency have been observed over the last decade in both floods (Uttarakhand 2013, Jammu and Kashmir 2014, Kerala 2018 and annual floods across the eastern States) and cyclones (Phailin 2013, Hudhud 2014, Foni 2019, Amphan 2020 and Nisarg 2020). These and other disasters across the country have highlighted how disasters affect the wellbeing of people: through loss of human lives, housing, livelihoods and infrastructure along with several secondary impacts.

Following disaster events, the Central and State governments shoulder significant and wide-ranging responsibilities for relief and multi-sectoral recovery and reconstruction, which requires accessing financial resources. Whilst mechanism and norms for accessing, allocating and utilising these financial resources for disaster management in India have evolved following the recommendations of successive Financial Commissions, these have not specifically addressed the task of disaster recovery and reconstruction. In response, the 15th Finance Commission recommends establishing specific windows into the National and State Disaster Response Fund (NDRF and SDRFs) and the Mitigation Funds. The NDRF and SDRFs – constituting 80 percent of the total allocation at the Central and State levels – are split into three funding windows: (i) Response (40 percent), (ii) Recovery and Reconstruction (30 percent) and (iii) Preparedness and Capacity building (10 percent). The remaining 20 percent constitute the National and State Disaster Mitigation Fund, a separate fund constituted under the Disaster Management, 2005. To manage these, the Finance Commission recommends formulating guidelines specific to each funding window, following which ‘The Guidelines for Recovery and Reconstruction’ is formulated.¹

1.1. Aims and Objectives

This guidance document aims to establish good practice based on the lessons identified from key recovery and reconstruction programmes implemented in India. These multisectoral programmes aim to help disaster-affected people rebuild their houses and livelihoods, and governments their public assets and infrastructure. The objectives of this document are to:

- i. Guide the Central and State governments in organizing recovery and reconstruction programmes to address post-disaster damages, losses and needs;
- ii. Guide the planning and implementing of recovery programmes, including financial planning and institutional arrangements, in consultation with disaster-affected people;
- iii. Recommend policies, strategies, areas of technical assistance and monitoring support needed for recovery programmes;
- iv. Suggest ways to optimize the use of national flagship programmes and other schemes and resources for implementing post-disaster recovery.

1.2. Scope

This guidance document represents a common set of directions shaped substantively by current government policies and details the purpose and mechanisms of the committed funding window for recovery. Whilst the document develops a shared understanding of definitions, roles and responsibilities, mechanisms and interventions, it is not intended as a prescriptive document as there is no single approach that can meet the needs of every disaster event. The directions

¹See 15th Finance Commission recommendations on: <https://fincomindia.nic.in/ShowPDFContent.aspx>

included in the guidelines thus need to be applied carefully in a disaster situation. As the guidelines aim to enable effective programme formulation for recovery and reconstruction tailored to local circumstances, it will be updated periodically to reflect future learnings from recovery and reconstruction.

1.3. Intended Audience

The guidance document is aimed at the NDMA, SDMA and DDMA functionaries, government officials, NGOs and CSOs, and sector experts working on recovery and reconstruction issues. The guidance document would guide the concerned Ministries and Departments at the Central and State levels in determining the allocation from the Recovery and Reconstruction window of the NDRF and SDRF and preparing financial plans for recovery and reconstruction programmes. The guidance document would also help set up a community of practice in recovery and reconstruction, which has emerged as a distinct area of disaster management.

1.4. Structure

The guidelines are divided into two sections. **Section 1** (Chapters 2 to 7) deals with the concepts of recovery and reconstruction and places them in the context of a newly set up funding window for recovery and reconstruction. It sets out operational guidelines for post-disaster assessments, fund allocations and access to funding for recovery and reconstruction, as well as monitoring and evaluation mechanisms. It also highlights the importance of capacity-building and information technology, and steps taken in this respect, to enhance the efficiency and longer term effectiveness of recovery and reconstruction programmes.

Chapter 2 sets the *definitions for recovery and reconstruction* for the Indian context and distinguishes it from concepts of response and relief. The section then introduces the Guiding Principles of Recovery and highlights lessons from key recovery programmes in India, underpinning the role of recovery interventions in addressing poverty and development. The section also brings into focus the salient features of a successful recovery programme and the importance of the ‘Build Back Better’ approach to the process of recovery and reconstruction. Finally, the importance of inclusive recovery through participation of various partners is stressed for sustainable resilience building.

Chapter 3 details the *objective and purpose of funding windows*. It underscores the significance of a committed source of funding for recovery and reconstruction as available through the recommendations of the Finance Commission as well as additional sources of funding to supplement funds for recovery and reconstruction.

Chapter 4 focuses on the *importance of assessments* to ascertain damage and loss in a post disaster scenario. It lays out the process of assessing sector wise recovery and reconstruction needs to inform early and medium to long term planning of recovery and reconstruction programmes.

Chapter 5, lays out the process of *developing and implementing a recovery framework/plan and programme* to put in place recovery policies, institutional arrangements, roles and responsibilities, coordination mechanisms and critically, community outreach and incorporating a needs based approach for an effective recovery programme. The section also highlights the importance of monitoring and evaluation for transparency as well as course correction to make the recovery programme more impactful.

Chapter 6 details out activities for *capacity building and information management for recovery and reconstruction*. Key initiatives for capacity building are establishing a resource centre for recovery and reconstruction (including documentation and publication of lessons learnt), developing a pool of PDNA and recovery experts, and training central and state staff, officers and managers who may become involved in recovery and reconstruction work in the future. The critical role of information management and the use of communication technology for efficiency of the recovery programme is also highlighted.

Chapter 7 sets out the *operational guidelines for release of assistance from the Recovery and Reconstruction Window*. It presents the process of allocation of resources (sanction and disbursement of recovery and reconstruction funds from the NDRF and SDRF), accessing assistance for the recovery process as well as putting in place a sector-wise recovery plan and review mechanisms.

Section 2 (Chapter 8) details out the key recovery and reconstruction interventions that need to be undertaken for a meaningful post-disaster recovery process. **Chapter 8** covers the *core elements of the guidelines*, which describe the *key recovery interventions*. This section discusses three key recovery components: *social and economic* (housing,

community infrastructure, livelihoods, small businesses, markets, educational and health facilities); *physical infrastructure* (transportation, energy, telecommunications, water and sanitation, irrigation etc.) and *social inclusion* (focus on including vulnerable social groups such as women, people with disabilities and displaced populations in the recovery process). It also highlights the importance of crosscutting issues in the recovery and reconstruction process.

Finally there is a section on **Annexures** that provide details on ‘*items and norms*’ of recovery assistance and commonly used *terminology* in risk management, along with *references* for information within these guidelines.

1.5. Summary

This guidance document serves the important objective of risk management at a time when post-disaster recovery and reconstruction have become integral to the course of development. Disasters undermine development gains and create an urgency greater than in normal development settings. To plan and implement recovery – often a challenging process – a dedicated funding stream is essential. As suggested by the 15th Finance Commission, the NDRF and SDRF funding windows need to be supported with guidelines outlining the recovery and reconstruction process. This guidance document thus presents the necessary procedures for the complex undertaking of recovery and reconstruction, which requires rapid response and planning, capacity and expertise and a coordinated and consistent efforts from multiple local, national and international actors.

The guidelines need to evolve as the practice of recovery and reconstruction advances in India: with new areas of interventions, new technologies and improved capacities. The guidelines must also be responsive to emerging issues and opportunities in such a way that it supports practitioners and governments to engage in progressive planning and implementation of recovery programmes. The activities included in the guidelines also provide the context for developing professional capacities in the area.

Section 1

Chapter 2. Concepts of Recovery, Reconstruction and Build Back Better

2.1. Distinguishing Recovery from Response and Relief

Defining Recovery

Disaster recovery and reconstruction has been defined by international agencies in multiple ways. A few definitions are as follows:

The **United Nations Office for Disaster Risk Reduction (UNDRR)** defines recovery as the restoring or improving of livelihoods and health, as well as economic, physical, social, cultural and environmental assets, systems and activities, of a disaster-affected community or society, aligning with the principles of sustainable development and “build back better”(BBB), to avoid or reduce future disaster risk.²

The **United Nations Development Programme (UNDP)** offers the definition as follows: Recovery aims to restore basic services and facilities, economic stability, physical assets, infrastructure, important socio-cultural and environmental features of communities and living conditions. Fundamental to UNDP’s conceptual framework for recovery is the application of principles that reduce the risk of future events, decrease the vulnerability of impacted populations, promote ‘building back better’ and ensure the sustainability of recovery efforts.³

The **World Bank** defines recovery as the restoration, and where appropriate, improvement of facilities, livelihoods, and living conditions of disaster-affected communities, including efforts to reduce disaster risk factors. While, “reconstruction” focuses primarily on the construction or replacement of damaged physical structures, and the restoration of local services and infrastructure. The term “recovery” in this guide encompasses both “recovery” and “reconstruction.”⁴

According to the **International Federation of the Red Cross and Red Crescent Societies (IFRC)**, recovery, in the context of disaster response, is a process that results in people’s lives returning to normal in such a way that they will be more resilient to future disasters. The extent to which people can recover after a disaster depends on the situation beforehand and how robust or resilient their resources are to withstand the effects of the disaster. For some, recovery will be relatively quick, while for others it may take years.⁵

The definitions above indicate that recovery is a broad process that aims not just to restore assets, livelihoods and services, but also to bring change and improvements in the lives of the affected people through the process of restoration. A recovery effort through improving living conditions, enhancing access to services and building safer communities strengthens the foundations for long-term development and welfare. Recovery is thus a multi-sector effort, which aims at improving the well-being of disaster-affected communities by helping them to build back better.

In the context of these guidelines, recovery can be defined as a **“comprehensive process of socio-economic interventions and physical reconstruction through which households and communities rebuild their assets, restore their livelihoods and strengthen their capacities to manage the impacts of a future disaster.”** Currently, the term ‘Recovery’ subsumes physical reconstruction and both these processes together.

Recovery as distinct from Relief and Response

Recovery is different from ‘relief’. ‘Relief’, according to the IFRC, refers to *the provision of essential, appropriate and timely humanitarian assistance to those affected by a disaster, based on an initial rapid assessment of needs and designed to contribute effectively and speedily to their early recovery.* The World Bank defines relief as the provision

² www.unisdr.org/we/inform/terminology

³ UNDP, A Guidance Note. National Post-disaster Recovery Planning and Coordination, 2017

⁴ <https://www.gfdr.org/sites/default/files/publication/DRF-Guide.pdf>

⁵ <https://www.ifrc.org/PageFiles/41104/IFRC%20Recovery%20programming%20guidance%202012%20-%20201232900.pdf>

of assistance or intervention immediately after a disaster to meet the life preservation and basic subsistence needs of the persons affected.

Recovery is also distinct from ‘response’. ‘Response’, according to UNDRR, are *actions taken directly before, during or immediately after a disaster in order to save lives, reduce health impacts, ensure public safety and meet the basic subsistence needs of the people affected.*⁶ Disaster response predominantly focuses on immediate and short-term needs and is organized and implemented together with ‘disaster relief’. The institutional elements of response often include the provision of emergency services and public assistance by public and private sectors and community actors.

Recovery begins early in the relief or response stage but aims at providing assistance beyond basic subsistence needs for assisting affected people rebuild lives and livelihoods. Certain response actions, such as the supply of temporary housing or cash transfer through employment guarantee schemes often serve as early recovery activities. Equally, when early recovery activities begin alongside relief assistance, the overall response has been shown to improve. Thus, relief, response and recovery are often considered as overlapping activities along a continuum, with recovery – consisting of multiple interventions – persisting over significantly longer durations beyond response and relief.

2.2. Recovery an Opportunity to ‘Build Back Better’

A key attribute of a successful recovery programme is to build back better. The phrase was first defined by the United Nations (UN) in The Sendai Framework for Disaster Risk Reduction 2015-2030 as *the use of the recovery, rehabilitation and reconstruction phases after a disaster to increase the resilience of nations and communities through integrating disaster risk reduction measures into the restoration of physical infrastructure and societal systems, and into the revitalization of livelihoods, economies and the environment*⁷. The BBB process refers not only to physical reconstruction, but also to interventions that improve livelihoods diversity and options for safer living for the affected populations.

The BBB approach forms a key pillar of the Sendai Framework for Disaster Risk Reduction (2015-2030) and thus needs to be integrated in recovery, rehabilitation and reconstruction. This integration can be through advocacy, needs assessment, recovery planning and implementation, and through improved accountability and transparency. Integrating the BBB approach in these aspects can improve the economic vitality and safety of affected communities, and provide opportunities to address vulnerabilities whilst increasing resilience in the longer term.

Ensuring resilient and robust outcomes of the recovery process requires improving standards and specifications of assets, facilities and infrastructure. This is a critical consideration in determining recovery and reconstruction costs. Thus allocating funds to improve the design and implementation of various components is essential. Equally important are investments in technologies, in building practices and in social inclusion mechanisms for affected communities for them to benefit from recovery through improved living conditions. How such improvements have been achieved through previous recovery programmes in India are presented in the section that follows.

2.3. Learning from Previous Disasters in India

State Governments have led and implemented recovery programmes and sought support as required following major disasters in the last two decades due to earthquakes, cyclones, floods, landslides and tsunami. Several recovery programmes, such as those following the earthquakes in Latur, Maharashtra (1993) and Bhuj, Gujarat (2001), have been implemented with assistance from the International Financial Institutions (IFIs) such as the World Bank and Asian Development Bank (ADB). Other, smaller recovery programmes in terms of financial costs and size, such as those following the Super Cyclone in Odisha (1999) and the Indian Ocean Tsunami in Tamil Nadu (2004), have been implemented with resources pooled from the governments, NGOs and the private sector. More recent recovery and reconstruction programmes for floods (in Bihar 2008, in Uttarakhand 2013 and in Kerala 2018) and cyclones (Phailin 2013, Hudhud 2014 and Fani 2019 in Odisha and Andhra Pradesh) have involved resources from IFIs, national and state level governments, and significant inputs from other stakeholders such as private sectors and NGOs. These recent programmes have been shaped with a long-term perspective on recovery that included cross-cutting and sector-based interventions to prevent affected people sliding further into severe poverty conditions.

⁶ <https://www.undrr.org/terminology/response>

⁷ UNDRR Terminology

A few salient features of these recovery programmes are discussed below:

(a) The Role of Post Disaster Needs Assessments

The recovery programmes were established following comprehensive damage and needs assessments, which indicated sector priorities and recovery cost estimations. Such assessments helped in effective streamlining of available resources and in minimising duplication and wastages. The assessments also clearly defined the roles and responsibilities of all relevant stakeholders for improving accountability and efficacy in the recovery process. The 2018 Kerala Post Disaster Needs Assessment (PDNA) is a good example of this.⁸

(b) Policy shift from Relief to Resilient Longer-term Recovery

The State Governments declared a policy for recovery and reconstruction, which laid down the entitlements of disaster affected people for recovery assistance. This policy was based on the extent of damages that people suffered and included a 'recovery assistance package' for different sectors. More recently, State Governments have moved beyond recovery assistance and envisioned longer-term recovery planning that address structural issues of vulnerability, poverty reduction and sustainability in ways that improve community resilience, which essentially means the capacity to withstand shocks and stresses and recover.

(c) Special Institutional Set-ups for Long-term Recovery

Many states established a special institutional set-up to implement the recovery programme. In certain states, this institutional set-up was wound up after the recovery programme concluded, as in Maharashtra and Tamil Nadu, which meant losing institutional and technical capacities developed through programme implementation. In other states, the set-ups became a longstanding institution in the form of the State Disaster Management Authority (SDMA). However, these institutions face certain sustainability issues. More recent institutional set-ups such as the Rebuild Kerala Initiative (RKI)⁹ established in the 2018 Kerala floods recovery process was mandated to oversee long-term reconstruction and risk reduction for the holistic green and resilient development of the state. This is an important area for recovery programmes, as institutional arrangements play an important role in the success of a recovery programme.

(d) Flexibility in Timelines, Planning and Implementation

Most recovery planning assumes a three-year implementation timeline, which almost always has been extended to a minimum of five years in previous recovery programmes. This suggests that recovery planning must incorporate flexible timeframes to comprehensively implement different recovery phases keeping long-term needs and aspirations in mind. Periodic reviews of these timeframes, activities and associated budget allocations are also essential for strengthening and easing the road to recovery, which is often a dynamic process. Exemplifying this learning is the Uttarakhand Disaster Recovery Project 2013 in which the World Bank supported the government by financing house restorations and rural connectivity, and pledged additional funds to extend these initiatives and further activities for building long-term resilience¹⁰.

(e) Government Leadership and Technical Capacities for Successful Recovery

The success of recovery programmes hinge on leadership quality and strength of technical expertise. Therefore, officers reputed for their vision, efficacy and integrity must lead recovery programmes. Similarly, competent engineers, finance and procurement experts, and management specialists need to support the programme. The implementation set up must also have the requisite capacity to supervise several technical consultancies. A study conducted by Stephen Platt shows that there is a clear relationship between post-disaster decision-making and quality of recovery in terms of whether crucial aspects of social and economic recovery are built back

⁸ Following the Kerala Floods in 2018, the Government of Kerala and UN agencies undertook PDNA that laid out a recovery plan and implementation strategy for efficient recovery and reconstruction. Kerala: Post Disaster Needs Assessment (2018) based on UN, WB, EU recovery methodology

⁹ This included developing, coordinating, facilitating and monitoring the Rebuild Kerala Development Programme (RKDP) through a participatory and inclusive process. The RKDP constitutes the State's strategic roadmap for Green and Resilient Kerala, including crosscutting and sector-based policy, regulatory and institutional actions, and priority investment programmes that are critical for resilient recovery. See: <https://rebuild.kerala.gov.in/en/>

¹⁰ In 2014 the World Bank supported recovery and reconstruction in Uttarakhand, and in 2019 pledged additional financing through a USD 96 million loan from the International Bank for Reconstruction and Development (IBRD). This supported the strengthening of the state's disaster risk management capacity, which has led to enhanced investment in long-term resilience through policies and institutions.

(f) Multi-sector Planning and Implementation of Recovery

Recovery programmes tend to focus on infrastructure and shelter reconstruction, often overlooking equally important components of education, health and livelihoods. Moving away from this traditional approach, recent successful recovery programmes, such as in Uttarakhand and Kerala, have adopted a holistic resilience approach. This approach integrates and balances multiple sectors under essential overarching social aspects such as gender equity, inclusive governance and risk reduction as their developmental impacts on communities are strongly interdependent.

(g) Focus on Small and Large-Scale Recovery Interventions

Past recovery programmes were exclusively planned and implemented for large-scale disasters, whilst largely overlooking small-scale or secondary disasters. However, beyond just large-scale recovery planning and implementation, governments are focusing on smaller recovery programmes, as their long-term impacts on communities can be equally disruptive and damaging.

(h) Community Outreach and Participation

Many recovery programmes have made special provision for consultations with the people. A dedicated institutional arrangement to reach out to the communities and hear their views and reflect them in the recovery programme has brought out a greater focus on improving the well-being of households and communities. It is now widely acknowledged that communities need to be at the centre of a recovery programme, and their active participation is critical to its success.

(i) Resource Mobilization for Recovery Programmes

Recovery programmes are based on raising resources through different funding windows. In India, several recovery programmes have been supported through IFI loans, as in Maharashtra, Gujarat and Uttarakhand, and Jammu & Kashmir. In some cases state governments have effectively utilised resources available through the national and state level disaster response funds, those raised by NGOs and funds mobilised through national welfare and social protection schemes. For example, the Uttarakhand recovery programme (2013) used the social protection schemes – Mahatma Gandhi National Rural Employment Guarantee Scheme (MGNREGS)¹² – to provide financial assistance to farmers for clearing their flood ravaged fields and restoring ponds and drainage systems. It also integrated housing subsidies under the Indira Awas Yojana (IAY) for rural housing reconstruction. Similarly, RKDP in Kerala (2018) trained women as masons for housing reconstruction under the Kudumbashree programme¹³. These existing welfare schemes can continue complementing and supporting the new financial window for recovery and reconstruction established by the 15th Finance Commission.

Based on these recovery experiences, the Guidelines for Recovery and Reconstruction can integrate key lessons that underpin ways to build back better for successful recovery programmes. This will be discussed in subsequent sections of these guidelines.

2.4. Salient Features of a Successful Recovery Programme

A successful recovery programme balances multiple sectors (infrastructure, livelihoods, education and healthcare) and integrates important crosscutting issues of DRR, gender equity and the environment. The recovery process should be inclusive by focusing on more vulnerable groups within a community, which may be more adversely impacted by disasters (women, children, elderly people, those with disabilities and persons who are displaced to name a few). They should be included in every stage of the recovery process. Furthermore, an important element of recovery is

¹¹ Platt, S. 2017. Factors affecting the speed and quality of post-disaster recovery and resilience' in: Rupakhety R and Olafsson S (eds) *Earthquake Engineering and Structural Dynamics*. Springer: Netherlands

¹² Mahatma Gandhi National Rural Employment Guarantee Scheme (MGNREGS) is a social security measure that aims to guarantee the Right to Work in rural India. Under MGNREGS, adult members in a household can volunteer for up to 100 days of wage employment through unskilled manual labour within five kilometers of the household. The scheme aims to enhance rural employment while creating critical assets such as rural transportation and water infrastructure that involve labour intensive manual tasks.

¹³ This Government of Kerala poverty eradication programme aims at empowering women.

transparency in the planning and implementation of interventions as well as monitoring and evaluation, including in the allocation of resources to ensure effectiveness and efficiency of the recovery process.

The following considerations are essential for an effective recovery process:¹⁴

- i. Families and communities drive their own recovery and should be given enough time to complete the recovery process;
- ii. Disaster recovery must promote fairness and equity, thus ensuring the vulnerable sections within the community (women-headed household, people with disabilities and displaced persons) are fully included;
- iii. Local governments must be empowered to manage recovery efforts, and both the Central and State Governments must allocate more resources to strengthen government recovery institutions, especially at the local level;
- iv. Good recovery planning and effective coordination is contingent on a comprehensive assessment of damage, loss and needs.
- v. Developing key and well-functioning partnerships with NGOs and the private sector is critical given their expanding and effective role in recovery. These partnerships and associated resources are fundamental to the quality and effectiveness of recovery;
- vi. Reviving and expanding private economic activity, employment and securing diverse livelihood opportunities for affected populations is necessary for sustainable recovery;
- vii. Successful recovery must leave communities safer by reducing risks and building resilience. This underscores the importance of identifying mechanisms to reduce risk and operable plans at the outset; and
- viii. As international agencies such as multilateral development banks and UN agencies play an important role in recovery, seeking their support on planning and formulation of recovery and reconstruction programmes can be advantageous.

2.5. Guiding Principles of Recovery

The practice of Recovery is guided by several essential principles based on the BBB approach that connects risk reduction, mitigation, equity, human rights, gender, housing, land and property rights by enabling smooth transitions from relief and recovery into long-term development¹⁵. It also emphasizes building upon on-going relief interventions to ensure that these inputs promote, contribute to and transition smoothly into mid- and long-term recovery¹⁶. The essential guiding principles can be summarized as follows:

(a) Transferring Resources to the People

Recovery programmes should focus on rebuilding peoples' assets and livelihoods through transfer of resources to the people that they lose during a disaster. The programme should provide financial and technical assistance to affected people without any discrimination, for them to improve their housing conditions and diversify their livelihoods. As they come together through the process of recovery and reconstruction, they build community resilience. A recovery programme should be an inclusive process that helps communities acquire necessary resources and skills useful for improving their living conditions and ensuring their future safety.

(b) Integrating Disaster Risk Reduction in Recovery

Recovery needs careful planning, regulations and improved compliance with risk reduction practices. Effective recovery processes must promote practices that reduce the communities' hazard risks and reinforce their resilience to future disasters, i.e. increase their capacity to withstand and recover. To this end, it is essential to undertake assessments of multiple risks and vulnerabilities that communities may be exposed to and that might hinder the recovery process and their future development. Recovery programmes should be developed based on these assessments, integrating appropriate risk reduction features in all aspects to avoid rebuilding risks and to enhance safety of communities. For example, shelter recovery should include disaster resilient building features and economic recovery programmes should aim to diversify livelihoods.

¹⁴ William. J. Clinton, (Office of the Secretary-General's Special Envoy for Tsunami Recovery: 2006)

¹⁵ UN HABITAT (2006).

¹⁶ BCPR (2008)

(c) Government leadership as an important pre-requisite for successful recovery

State Governments must plan and lead the recovery programmes and allocate resources for the interventions. Such leadership is necessary for efficient recovery planning and implementation. Governments must provide continuous support to recovery programmes throughout their implementation period through allocating resources and placing competent officers and staff with the recovery programme.

(d) Policies and Institutional Mechanisms for Recovery

Along with a recovery policy, specific institutional setups can improve efficiency of recovery programme implementation. This requires governments to establish specific institutional setups for recovery and create necessary capacities for their functioning. While the recovery programme is led and implemented at the state level, institutional mechanisms must empower the district administration and Panchayati Raj institutions (PRIs) to manage recovery efforts. Effective recovery management also implies strengthening governance processes as recovery is closely linked to national and local governance norms. Overall, cost-effective and efficient recovery strategies would require policies and mechanisms that ensure optimal resource allocation, transparency, non-discrimination and quality assurance.

(e) Implementing Recovery through Convergence with National Development Programmes

Recovery efforts should build on and converge with ongoing developmental processes at all levels: national, regional and local. Integrating resources available under national flagship programmes¹⁷ implemented by the Central and State governments can guard recovery programmes from being standalone interventions without continuity.

(f) A Joint Effort of Government, NGOs, Private Sector and Communities

An inclusive recovery is supported through different stakeholders: governments, NGOs, IFIs, private sector and communities. Important recovery programmes in India have been implemented with support from NGOs, private sector and community-based organizations. Developing these key partnerships and harnessing their respective strengths and roles in recovery is essential for effective recovery planning and implementation.

(g) Including most vulnerable members of the society

Recovery programmes should be non-discriminatory in providing assistance that must promote fairness and equity. The interventions in the recovery programme need to include all the segments of disaster-affected populations. These should focus on the inclusion and participation of specially disadvantaged groups such as weaker sections of the society, people with disabilities, and displaced populations.

(h) Gender Equity and Empowerment of Women

Gender equity and empowerment of women should be a key crosscutting issue in all recovery activities. Geographic areas with high levels of gender inequity and discrimination must develop specific components that promote women's involvement in all aspects of community life and allow them to lead community issues.

(i) Transparency and Accountability in Implementation

Recovery planning and implementation must be transparent and fully accountable to all stakeholders including programme beneficiaries, government agencies and NGOs. It should include effective monitoring and evaluation mechanisms that can guide and allow for timely intervention of corrective measures. There should also be a clear policy for public disclosure, particularly for recovery and reconstruction plans to all the affected communities. Beneficiaries should be central to the recovery process through information, participation and grievance redress mechanisms in order to make the process effective in the long run.

(j) Community-centred approach

Recovery programmes must facilitate individuals and families to recover from their losses and sustain their physical, social and economic wellbeing. These programmes should also improve communities' capacities to

¹⁷ Flagship programmes include the Mahatma Gandhi National Rural Employment Guarantee Scheme (MNREGS), *Pradhan Manti Awas Yojana* (PMAY), *Sarva Shiksha Abhiyan*, National Rural Health Mission and *Swachh Bharat* Mission.

manage existing and future risks and improve their access to diverse and sustainable livelihood opportunities. Thus, the objective of recovery should be to empower people to recover from disasters through provision of opportunities, tools, knowledge, resources and human agency to meaningfully participate in the processes and contribute to the recovery effort. This requires an institutional approach that enables and promotes involving disaster-affected communities at all implementation levels and that encourages their ownership of recovery efforts. It should be led in a way that does not reinforce social inequalities and hierarchies.

In conclusion, it is important to distinguish ‘recovery’ from ‘response’ and ‘relief’ in order to approach the specific issues of each phase of disaster management in a focused manner. It is also imperative to learn from past experiences to strengthen recovery and reconstruction efforts in the present and future. Furthermore, a BBB approach to recovery is essential for a more comprehensive and meaningful recovery process. This approach should cut across sectors and keep in mind the needs of most vulnerable groups within the community. Importantly, emphasizing transparency and accountability of this process would ensure positive and equitable development for all.

Chapter 3. Objective and Purpose of the Funding Window

A recovery programme needs to be supported through *allocation of resources for planning and implementing the recovery programme*. In the past, several recovery and reconstruction programmes have been implemented with budget allocation and loans from IFIs, particularly the World Bank and Asian Development Bank. However, there has been no committed source of funding for recovery and reconstruction within the NDRF and SDRF in the country.

The 15th Finance Commission has recommended three funding windows within the NDRF and SDRFs, which are dedicated to the following functions: (i) Response; (ii) Recovery and Reconstruction; and (iii) Preparedness and Capacity-building. Out of 80 percent of the total allocations that would be available under the NDRF and SDRFs, 40 percent would be allocated for Response, 30 percent for Recovery and Reconstruction, and 10 percent for Preparedness and Capacity-building. For the year 2020-21, the allocation is as follows:

Allocation under the NDRF and SDRFs for 2020-21

(Rs crore)		
Funding windows/sub-windows	National Corpus	States' Corpus
Mitigation - 20 per cent	2478 (NDMF)	5797 (SDMF)
Response - 80 per cent	9912 (NDRF)	23186 (SDRF)
Total	12390 (NDRMF)	28983 (SDRMF)
Distribution of NDRF/SDRF		
i) Response and Relief – 40 per cent	4956	11593
ii) Recovery and Reconstruction – 30 per cent	3717	8695
iii) Capacity Building – 10 per cent	1239	2898

Source:- XV-FC of India Report 2020-2021

In the aftermath of a disaster, the State Government provides relief assistance to the disaster-affected people. The assistance is provided through the 'Response' window of the SDRF. The State Governments can ask for additional funds through the 'Response' window of the NDRF when they exhaust their own funds.

In addition to response, the State Governments need to prepare a recovery plan based on the estimate of damage, loss and needs; and implement it through the 'Recovery and Reconstruction' window of the SDRF (30 percent). When State Governments do not have adequate funds within the 'Recovery and Reconstruction' window, they can seek assistance through the same window of the NDRF.

At times State Governments develop multiple recovery programmes within the state for different disasters. All the recovery programmes are supported by this funding window. Every year the State Governments allocate resources for different recovery programmes through this window. Since a recovery programme is implemented over a period of more than one year (a large recovery programme may take 3 to 5 years), a fund flow for all the recovery programmes need to be planned and funds allocated for the various recovery programmes in progress. As a result, if the funds required for the recovery process fall short on the basis of all the commitments, then the State Government applies for additional funds from the NDRF. The details of how the States would apply for funds from the Recovery and Reconstruction window of NDRF funds are described in Chapter 7.

The Recovery and Reconstruction window of NDRF / SDRF provides a committed source of funding for recovery. However, it is not the only source of funding. State Governments need to mobilize funding through additional sources as well. These additional sources of funding are discussed below.

3.1. Additional Sources of Funding for Recovery and Reconstruction

Often the size and scale of a disaster may require the recovery and reconstruction programme to seek funds in addition to the SDRF and NDRF. For this, state governments can mobilize alternative resources such as from the national flagship programmes, private sector contributions, reconstruction bonds and international assistance. These alternative funding sources are:

(i) Convergence with on-going National and State-level Development Schemes

National flagship programmes allow flexible funds up to 15 per cent of the total outlay for each programme¹⁸. State governments can mobilize these flexible funds and reallocate them for implementing recovery in the sectors associated with the flagship programmes. Similarly, state governments can utilize their own schemes for providing additional resources to the recovery programme.

National flagship programmes aim to improve the living conditions of historically disadvantaged groups by addressing their vulnerabilities that make it challenging for them to access basic services. In a disaster situation, these groups tend to be most exposed and vulnerable to its impacts. The national flagship programmes can serve the twin purpose of contributing to recovery as well as reducing vulnerability of most disadvantaged groups. At the same time, the flexible components enable the State Governments to apply the scheme to the affected populations beyond the original target beneficiaries.

(ii) Relief Funds

Relief funds in India have been established at the national and state levels entirely through public contributions such as from individuals, organizations, trusts, companies and institutions. At the national level, the Prime Minister's National Relief Fund (PMNRF) disburses immediate relief to families affected by disasters due to natural hazards like floods, cyclones and earthquakes. Based on similar principles, the Chief Minister's Relief Funds¹⁹ supports disaster response at the state level. Under both national and state relief fund mechanisms, recovery efforts have materialised following the Indian Ocean Tsunami (2004) in Tamil Nadu, the floods in Kerala (2018) and various cyclones in Odisha.

Sometimes special relief or recovery funds are established for supporting specific recovery programmes. A recent example is the PM Cares Fund²⁰ created for response and recovery from COVID-19. These special funds channel private and corporate contributions making significant levels of resources available for immediate and longer-term recovery.

(iii) International Assistance (IFIs, UN and International NGOs)

Following a disaster, the Government of India does not make an appeal for international assistance. However, it can accept assistance if it is offered without any condition. Similarly, the Government of India may decide to borrow and negotiate a loan from a multilateral bank for recovery and reconstruction.

As it is an established policy, State Governments cannot request or negotiate multilateral or bilateral international assistance and depend on the Government of India to do so on their behalf. IFIs like the World Bank and ADB, have been among the most important sources of financial assistance for post-disaster recovery and reconstruction in India. For past recovery programmes, the Government of India has approached these development banks to provide loans. Since 1990, around nine reconstruction projects have been implemented

¹⁸ All the important national programmes—Mahatma Gandhi National Rural Employment Guarantee Scheme (MGNREGS), Pradhan Mantri Awaas Yojana (PMAY), Sarva Shiksha Abhiyan (SSA) and National Rural Health Mission (NRHM)—can provide resources for implementing recovery programmes in their respective areas.

¹⁹ Examples are Chief Minister's Relief Fund Odisha and Chief Minister's Distress Relief Fund (CMDRF) in Kerala.

²⁰ The Prime Minister's Citizen Assistance and Relief in Emergency Situations Fund (PM CARES Fund) was created on 28 March 2020 following the COVID-19 pandemic in India for combating, and containment and relief efforts against the coronavirus outbreak and similar pandemic like situations in the future.

across Indian states with the support of IFI loans worth approximately USD 2.5 billion²¹.

UN agencies provide recovery assistance through technical support, recovery planning and capacity building. International NGOs can provide financial and technical resources for recovery and reconstruction, subject to necessary government clearances.

Though recovery in India does not depend upon international resources, substantial amounts of resources are made available through different international agencies and NGOs. It is important to track these resources and account for them. State Governments may be assisted in coordinating international assistance.

(iv) Corporate Social Responsibility Window for DRR and Recovery

The private sector provides resources for recovery and reconstruction in India through its Corporate Social Responsibility (CSR) window. These CSR funds have been channeled through two ways: by contributing to national and state relief funds, and by adopting entire villages for reconstructing social and community assets as done after the 1999 Odisha Super cyclone and the 2001 Gujarat earthquake²². In addition to CSR financing, the technical and professional expertise offered by the private sector – engineering and financial and management services – is useful for implementing recovery programmes. Private sector companies have also been converging efforts under industry associations such as Confederation of Indian Industries (CII) and Federation of Indian Chambers of Commerce and Industries (FICCI) to support recovery programmes through partnering with NGOs.

However, these resources need to be allocated for earmarked priorities to ensure greater accountability and transparency in their utilization. Towards this end, a formal coordination system between governments and the private sector is essential.

(v) Non-Governmental and Civil Society Organizations

A large number of NGOs and Civil Society Organizations (CSOs) raise significant amounts of resources from donors to support and participate in recovery programmes. These resources are therefore usually influenced by donor priorities and preferences targeted towards specific sectors or geographical region. Whilst such resources are easier to avail during relief and response phases, and harder to raise during recovery, state recognition and support for the NGOs and CSOs assists them to mobilize resources from donors. The state governments often establish coordination forums for NGOs, which have been effective in past recovery programmes²³.

However, in addition to challenges in tracking these financial resources, difficulties in the accountability of their participation in the recovery process has been raised in previous programmes. Therefore, as for international organizations and private sector, a formal coordination system is essential to track information on the resources raised and disbursed by NGOs and CSOs.

(vi) Insurance and Risk Transfer

Insurance instruments are most feasible for natural hazards that occur infrequently but with high potential impact. Insurance is feasible when: risk pools are large, the data on damage and loss is available, and payouts can be estimated with reasonable accuracy. In India, insurance services are mostly limited to the organized private sector, which can claim damage and loss of assets and receive payouts from insurance companies. Insurance is an important source of recovery assistance for this sector.

However, the large number of low-income groups engaged in the informal private sector and typically most vulnerable to disaster impacts do not have access to insurance. These groups depend on the government and NGOs for recovery assistance. During the last two decades, small businesses and informal sector vendors have accessed microinsurance, which is based on same principles as insurance²⁴ but targets the needs of people

²¹ Examples of this include the recovery programmes following the 2008 Kosi floods in Bihar and the 2013 floods in Uttarakhand floods

²² GoI-UNDP Disaster Risk Management Programme

²³ Following the Indian Ocean Tsunami in 2004, the East Coast Development Forum (ECDF) of 12 local NGOs was established to coordinate an effective relief and rehabilitation programme.

²⁴ Insurance is a financial arrangement in which the insured pays a small amount (premium) up front in return for the insurer's promise to pay a much larger sum (claim) in the event of a defined adverse event. (World Bank)

living in poverty conditions. It is emerging as an important risk transfer measure for vulnerable communities that can improve their lives, though its range of products and services is still limited.

(vii) Women's Self-Help Groups

Seed funds provided by community-based organizations (CBOs) such as women self- help groups (SHGs) have been effective in kickstarting economic activities in affected communities. SHGs provide financial and social support to their members and empower them to consolidate their savings and address social issues affecting their lives. They provide women with microfinance services such as savings and loans, offer training and skills development, and facilitate access to livelihoods activities and market linkages. These provide opportunities for women to increase their incomes. This helps build self-reliance, confidence and resilience to future disasters.

In conclusion, recovery processes often require pooling funds from different sources. In India, State Governments can avail recovery and reconstruction funds through the SDRF, and further through NDRF funds if necessary. Additional funding sources are equally important, which when mobilised strategically and effectively by State Governments can result in improved, diverse and inclusive programme formulation and implementation. When the funding is mobilized through different sources, an increase in the number of stakeholders and improved oversight for these funds leads to a better quality and diversity of programmes.

Chapter 4. Assessing Recovery and Reconstruction Needs

For utilising the ‘Recovery and Reconstruction’ funding window under the NDRF and SDRF, it is necessary to determine the resource needs for different components of the recovery programme. These resource needs are determined following two important processes that form the building blocks of a recovery programme:

Process 1 involves assessing damage and loss in every affected sector following a disaster event, which leads to the identification of sector-wise recovery needs and provide the basis for estimating the cost of recovery interventions. This process is undertaken using the Post-Disaster Needs Assessment (PDNA) tool; and

Process 2 uses the sector-wise recovery needs to develop an aggregate recovery plan / framework. The plan prioritizes recovery needs that are more important from the perspective of wellbeing of affected communities.

Both these processes are comprehensive exercises that involve several key steps requiring technical expertise, financial planning and key stakeholders consultation. The ensuing section describes the steps in Process 1 on assessing damage, loss and needs, and outlines the support required from governments to effectively undertake it. Process 2 on developing the recovery plan is described in Chapter 5.

4.1. The Role of Post Disaster Needs Assessment (PDNA)

The PDNA is a globally accepted tool for assessing damage and loss following a disaster. Through this tool, the government can assess the impact of a disaster, identify recovery needs, estimate recovery costs and define a broader strategy for recovery. The tool brings together information on various aspects of damages and losses, and recommends recovery interventions from a development perspective. It builds on existing disaster assessments that are conducted to provide immediate relief to affected people and restore critical infrastructure. The PDNA comprises detailed damage and loss assessment so that the disaster impact on people and the economy can be comprehensively analysed and estimated. This analysis and estimation leads to the development of a recovery plan and helps the government to allocate resources for its implementation.

4.2. Initiating the Needs Assessment

The State Disaster Management Authority (SDMA) must initiate the PDNAs. This must draw upon the PDNA India tools – the Handbook, the Manual and the SoP – prepared by the Government of India through the National Institute for Disaster Management (NIDM). The SDMAs can also refer to several sector-specific guidelines prepared jointly by the UN, World Bank and the European Union.

Depending upon the nature and scale of disaster, the SDMAs can decide upon the ambit of PDNA in terms of sectors and geographical area, and decide whether to involve other national and international partners in conducting the assessment. The SDMA may conduct the PDNA through its own resources, may seek NDMA’s additional assistance or in cases of large scale disasters may request assistance of international agencies.

For seeking assistance of international agencies in conducting the PDNA, the SDMA should first contact the Department of Economic Affairs (DEA) for its facilitation. On this request, the DEA will consult with the MHA and the NDMA to decide upon the participation of international agencies in supporting the PDNA. An international tripartite agreement involving the United Nations, World Bank and European Union provides the basis for international support for a nationally owned exercise such as the PDNA.

The key steps in conducting the PDNA are as follows:

(a) Drafting Terms of Reference (ToR) for PDNA

The SDMA needs to formulate a clear Terms of Reference (ToR) for conducting the PDNA based on an understanding of the magnitude and scale of the disaster. The ToR includes the sectors to be covered, data to be

collected, expert teams to be deployed and the reports that need to be prepared. The ToR should be shared with all participating departments and agencies, and their feedback must be included.

(b) Schedule and Timeframe for PDNA

The SDMA should conduct the PDNA one or two weeks after the disaster and decide its schedule and timeframe whilst considering a number of issues: (i) the availability of primary data upon damage and loss before commencing; (ii) ensuring it does not impede or interfere with ongoing relief and response activity; (iii) ensuring that the local government employees are back on duty and are available to assist in conducting the PDNA; and (iv) feasibility of travel and movement of the PDNA team.

The PDNA should not be conducted in a very short timeframe as it could result in missing crucial data on damage and loss, nor should it be a long-drawn process. Typically, it takes approximately three to four weeks for conducting the PDNA.

(c) Government Participation and Formation of Sector teams

The SDMA leads the organization process of the PDNA and nominates state government officials to participate and support it. Since sector-wise assessments are central to the PDNA, the officers from different departments should participate in the relevant sector teams and provide necessary information about damages and losses. In addition, the SDMA may also seek and nominate sector experts available within the country for this exercise. Before commencing, the SDMA should organize an orientation programme in PDNA methodology for all the sector teams participating in the exercise. The participation of government officials in the orientation programme is important for government ownership of the process and for validating the data on damages, losses and needs.

(d) Provision of Local Facilities

The SDMA should provide local facilities to the PDNA team including an office space, a training facility and communication facilities. Some local staff may be designated to provide key information and communication technology (ICT) support. The state government can further facilitate field visits by providing transportation facilities to the sector assessment teams, as this will allow them to conduct the PDNA efficiently.

(e) Collection of Baseline and Primary Data

Government agencies should provide baseline data for all sectors being assessed. Where baseline data is not readily available, the government should identify sources of information for constructing the data. Government agencies should also depute their staff for collecting primary data on damages and losses²⁵ that must be made available to the sector teams on commencing the PDNA.

(f) Field Visits

Sector teams must undertake field visits to assess and crosscheck the damage and loss data. The number of field visits and their locations will be decided in consultation with the government agencies. These visits would provide comprehensive information about sectors impacted by the disaster and enhance the already available data.

(g) Household and Community level Surveys and Interviews

PDNA involves conducting household and community surveys by the sector teams with critical support from the government. In designing the questionnaire and framing the issues for discussion, government agencies can provide community feedback and local insights. They are also better positioned for establishing a rapport with the household and communities and seek information through interviews in the local language.

(h) Writing the Report

All the sector teams must write and submit their sector-specific reports to a coordination team that will consolidate and finalize the PDNA report²⁶. The SDMA must constitute the PDNA Coordination team with a

²⁵ For example, in the agriculture sector, data on total area and crops affected needs to be collected and compiled by the Ministry/Department of Agriculture.

²⁶ The coordination team will moderate and edit the sector reports, produce an Executive Summary Report capturing the most important aspects and findings of the PDNA, and ensure that the report correctly reflects key recovery priorities.

diverse composition depending upon the necessity to induct experts from different sectors. The SDMA must interact with the coordination team to produce a report that will be widely acceptable.

(i) Presentation of PDNA Results

The PDNA results will be shared as a presentation and a report. The PDNA team will present its findings to the SDMA and State Government. This presentation must include a sector-wise summary of damages, losses and recovery needs. It will also suggest the financial resources and technical skills required for implementing recovery. All the government ministries, departments and sector teams will attend the presentation and provide clarification sought by government representatives.

The PDNA report will be submitted to the SDMA for a time-bound review. The SDMA will circulate the report within various ministries and departments for comments. The PDNA team will incorporate comments received and finalize and submit the report. Once the government approves the final PDNA report, it becomes an official report forming the basis for recovery planning and implementation.

The PDNA must be a government led and owned process, which may be supported by other national and international agencies. The government's leadership is critical for a successful PDNA, as is its timeliness and cost efficiency. Finally, the process of assessment must be inclusive, meaning that the government must ensure participation and consultation by relevant government departments (both horizontally and vertically), civil society, the private sector, and face-to-face with people in the affected communities.

Chapter 5. Developing and Implementing a Recovery Framework / Plan and Programme

Based on the PDNA results, the SDMA develops a recovery plan/framework. This framework must include a recovery policy, a recovery plan which includes sector-wise programme components, institutional arrangements, and various implementation mechanisms. The process of developing a recovery plan/framework must account for the scale of damage and loss, identified recovery needs, state resources and professional and technical capacities for programme implementation. This section describes key steps which are involved in developing and implementing a recovery programme.

5.1. Recovery Policy / Strategy

The State Governments need to lay down a policy or strategy for recovery. Such a document approved by the governments at the highest decision-making level lays down a broader vision, key sector priorities, specific interventions in different sectors and benefits to the affected communities. In the past, most of the State Governments laid down the policies for recovery (Maharashtra, Gujarat, etc.) and implemented it through the institutional arrangements set up for this purpose. A Recovery Policy / Strategy is a declaration of the commitments made by the State Government, which brings equity and transparency in the programme implementation. While developing the Recovery Policy, the guiding principles of recovery as mentioned in Section 2.5 need to be considered.

5.1.1. Needs-based Approach

A Recovery Policy / Strategy should follow a needs-based approach. It should be clearly linked to damage, losses and needs as projected through the PDNA. The Policy / Strategy should recognize differentiated needs of the affected and vulnerable populations.

A disaster event may displace certain communities. There is a difference between displaced and non-displaced communities in terms of needs. In certain situations, when winter is approaching, addressing shelter issues for the displaced people is extremely important.

Recovery needs emerge during the relief phase, and a clear recognition of these needs leads to proportionate resource allocation for various components. In remote regions, restoring access to communities is critical to recovery. Similarly, restoring supply chains and resumption of various services assumes priority in a situation where the local economy has a narrow base.

Communities are not uniformly affected. Some are more affected than others and in different ways. While a recovery programme cannot address specific recovery needs of each household, an aggregate analysis can provide information on different recovery needs of various communities. A recovery policy / strategy needs to reflect different recovery needs of the communities and must be based on the concerns of equity and inclusiveness.

Certain kinds of interventions such as cash for work (CfW) are not meant for all the people. People without disabilities can participate in CfW activities or contribute their labour for constructing temporary shelters or permanent housing. However, people with disabilities would find it difficult to participate in such programmes. Their recovery needs to be addressed differently.

5.2 Recovery Plan

The cost of sector-wise recovery needs as included in the PDNA indicates how the recovery plan should be developed. If it is a smaller recovery plan, the SDMAs can develop it themselves. If the recovery programme is to be developed on a larger scale, the SDMAs can ask for the assistance of NDMA and external agencies.

A Recovery Plan presents sector-based estimates of recovery needs along with greater detail of cost components, implementation arrangements, time-frame, and fund flow. A Recovery plan also presents state priorities in terms of activities that need to be supported through allocation of resources.

A Recovery Plan includes component-wise financial estimates for recovery and reconstruction programme. In addition to SDRF and NDRF, the Plan identifies various ways of mobilizing resources for different components, such as regular government schemes and programmes through which part of the recovery programme can be implemented. These sources of funding have been discussed in an earlier chapter.

5.2.1. A Collective Effort

The State Governments have the responsibility for supporting recovery and reconstruction programmes on the basis of needs, priorities, affordability and sustainability. However, other stakeholders, which include NGOs, private sector, international agencies and affected communities must also join this effort. A recovery plan is a collective effort of various stakeholders led by the State Government.

A recovery programme requires the commitment of large resources. It would not be possible for the State or Central Government to find all the resources for the recovery programme. It is necessary that the State Government should seek the assistance of other stakeholders including the affected communities for the recovery programme. While the State Government, with the resources available under the SDRF and NDRF, should help the affected communities as per the norms of assistance attached to these guidelines for the purpose of recovery, such an assistance may just be a catalytic support and would also require the affected people to contribute. Individual and household recovery is a collective and shared effort, and the affected communities also need to contribute their own resources.

5.2.2. Assistance and Benefits for Affected People and Communities

Individual assistance and benefits to affected households and communities under various programme components are laid down in the recovery plan. The recovery plan establishes how the affected people receive assistance for various areas of damage and loss. All the beneficiaries would receive the same assistance from the SDRF / NDRF. The quantum of assistance would be in accordance with the norms of recovery assistance for individual beneficiaries as determined and attached to these guidelines. If the State Government decides to provide assistance which exceeds these norms, it would have to allocate funds from its own budgetary resources other than the SDRF.

The recovery plan also suggests the modality for disbursement of assistance to affected recipients and of implementation. If the beneficiaries need to receive assistance in three instalments through Direct Benefit Transfer, the scheme of assistance would be mentioned in the Recovery Plan accordingly. These details are necessary as they determine the flow of assistance to the people and its implications for the total fund flow.

5.2.3. Priority to Assistance at the Household and Community level

The SDMA must first prioritise utilising the allocated SDRF and NDRF resources for those programme components that help individual households recover from the impact of disasters. For example, if the households have lost their houses or means of livelihoods, the SDRF and NDRF assistance would first address these household needs. It is important that all affected households receive recovery assistance on an equitable basis.

Recovery of social and community infrastructure such as schools, hospitals, village roads, drains, water supply schemes and sanitation facilities should be addressed as the next priority. Recovery of these essential facilities are critical to household and community recovery, as they restore their access to social services and productive activities. Once these priorities are addressed, large infrastructure recovery, such as highways, bridges and major improvements in power and telecommunications, can be met through the SDRF / NDRF. In most cases, infrastructure recovery is supported through sector budgets and allocations.

5.2. Institutional Arrangements

(a) Institutional Set-up for Recovery

A crucial element of post-disaster recovery planning is defining its institutional arrangements. As this multi-sector recovery process involves numerous actors, an institutional set-up that ensures effective leadership and programme coordination is essential. In recovery, institutional arrangements refer to assigning clear roles and responsibilities

within the government to effectively lead the planning, implementation and monitoring processes. This institutional arrangement consists of five principal elements²⁷: to facilitate implementation through various agencies, identify technical skills and capacities, pool and allocate resources, set up coordination mechanisms and appoint oversight functions. Strong institutional arrangements also integrate a transparent, methodical and robust system to monitor recovery activities, track flow of funds²⁸ and evaluate the programme. Such assurance of transparency and accountability are critical for the success of institutional arrangements.

A multi-sector large-scale recovery programme is challenging for a single ministry or department to implement and requires a special institution to coordinate the several departments or agencies that support programme implementation. This special institution can either be a new set-up or an existing institution expanded to suit recovery operations. Across the states, three different types of institutions have been set up to implement recovery programmes, described as follows:

(b) Project Management Units (PMUs) or Project Implementation Units (PIUs)

Recovery and reconstruction projects predominantly funded by IFIs such as the World Bank and Asian Development Bank typically establish PMUs/PIUs²⁹ for the limited duration of implementation³⁰, which are then wound up once the programme concludes. These PMUs/PIUs, which are located within a government department or agency, comprise of both technical staff deputed from other departments and short-term recruitments and consultants who support PMUs/PIUs operations. Such set-ups can avoid the ministerial structure of the government and have the requisite autonomy and flexibility for swift decision-making. However, institutional and technical capacities created through the PMU/PIU are not sustained when they are wound up.

(c) Special Institutions

Certain states such as Bihar and Kerala have set up new institutions to implement the recovery programme. After the 2008 Koshi floods, the Government of Bihar created the Bihar Aapda Punarwas Evam Punarnirman Society (BAPEPS) for implementing the recovery programme, which was funded by the World Bank. Similarly, following the 2018 floods, the Government of Kerala established the Rebuild Kerala Initiative (RKI) Implementation Committee to coordinate, facilitate and monitor programmes being implemented by various agencies. Unlike the PMU/PIU, which are set up within a Department, these inter-agency institutions are formed with the objective of providing broader financial and technical support for all participating departments. These institutions can go beyond the recovery and reconstruction programme, and implement other development interventions. These institutions could be wound up after the recovery programme concludes or they could be allowed to continue for other purposes.

(d) State Disaster Management Authorities (SDMAs)

Following the provisions of the DM Act (2005), all states have established their SDMAs³¹, which, along with other responsibilities, are mandated with implementing recovery and reconstruction programmes. Especially in small scale recovery programmes, State Governments need not create new institutions as the SDMAs can plan, facilitate, implement and monitor recovery programmes with support of other participating agencies. Such recovery programmes can be an opportunity for building the professional capacity of SDMAs to spearhead future recovery processes. State governments can decide to utilize an institutional arrangement that best suits their recovery and reconstruction needs.

5.3. Institutional Responsibilities

The institutional set-ups established by the State Governments require the following specific activities for recovery and reconstruction programme implementation, described as follows:

- i. Plan the recovery programme on the basis of PDNA;

²⁷ UNDP (2017). *A Guidance Note – National Post-Disaster Recovery Planning and Coordination*.

²⁸ This includes the manner in which funds for recovery are mobilized and pooled, and how they flow.

²⁹ The PMUs/PIUs are established through an executive order or are registered as a Society under the Societies Registration Act, 1860.

³⁰ For example, see the Maharashtra Emergency Earthquake Rehabilitation Programme (MEERP) implemented during (1994-1999) <http://meerp.tripod.com/dmplan.html> and Jammu & Tawi Flood Recovery Project (2015-ongoing/2021) <http://jtfrp.in/> ; <https://projects.worldbank.org/en/projects-operations/project-detail/P154990>

³¹ This is with the exception of certain states such as Odisha and Gujarat who formed their SDMAs preceding the DM Act (2005) to implement recovery and reconstruction programmes (following 1999 Odisha Supercyclone and 2001 Gujarat Earthquake). These SDMAs continued to function even after those recovery programmes were concluded.

- ii. Formulate a recovery policy laying down the priorities and entitlements;
- iii. Support the development of a multi-sector recovery programme;
- iv. Allocate resources among various sectors as per the indicated priorities;
- v. Set up the structure for the everyday management and coordination of various agencies within the government;
- vi. Facilitate the participation of NGOs, private sector, and academic institutions;
- vii. Resolve disputes and grievances in the field;
- viii. Monitor recovery and reconstruction finance;
- ix. Ensure mitigation measures are included in recovery;
- x. Monitor the implementation process at various levels;
- xi. Assess midterm implementation for incorporating improvements and adjustments in the recovery programme;
- xii. Disseminate information about the programme through various media channels.

The State Governments must provide these institutions with a clear mandate for accessing financial, technical and logistical resources necessary for undertaking their responsibilities effectively. The State Governments should also equip these recovery institutions with the authority and leadership for coordinating with other line departments and agencies (international, national, state and local).³²

5.4. Roles and Required Support Structure

In order to execute the above responsibilities, recovery institutions must have the requisite support from its leadership and staff. This means that the institutional roles must comprise of:

(a) Experienced and Informed Leadership

These institutions must be led by administrators or professionals with necessary experience and authority to plan and implement a recovery programme. Leadership is key in shaping the recovery programme, accessing financial and human resources from within the government, seeking cooperation of other government agencies and coordinating with external agencies. Effective leadership minimizes partisan considerations and promotes openness and transparency within the implementing agency.

(b) Specialized Functions

These institutions should include constituent units dedicated to management support, engineering, finance, social facilitation and community outreach, and information management. Recruiting staff in a flexible manner for these constituent units is important for ensuring varied and targeted support necessary during recovery programming. For example, few could be recruited for the programme duration, few others could join as consultants, and other specific tasks may require to be outsourced to technical institutes and experts for the project duration.

(c) Consultancy Support

Certain technical resources necessary for successful recovery may be unavailable within the government and thus need to be incorporated through consultancies. These may include consultancies for design, engineering services, quality assurance, financial management, IT systems support and management support. The recovery institutions must have the authority and resources to recruit and supervise such consultancies during the period of recovery programme.

(d) Flexible Recruitment and Continuity of Support

Developing an institutional staff structure that facilitates employing trained and experienced professional and technical staff is critical for programme success. Also important is ensuring continuity of tenure/contract for the recruited staff for them to be able to contribute meaningfully throughout the processes of programme development, implementation and monitoring.

(e) Decentralized Structure

Recovery happens at the level of villages and towns. From the outset, such institutional setups must be established and must function at multiple levels: from the higher levels of State Governments to intermediate district and sub-district

³² These include international agencies such as (IFIs, UN, IFRC), national and state agencies such as ministries, departments and other technical agencies, and the private sector, academic institutions and NGOs.

levels. This ensures that the intermediate- and ground-level implementing programme staff function as part of recovery institution, which is essential for greater coordination and collaboration during implementation. This improves the likelihood that recovery policies are implemented in the spirit in which they were designed.

5.5. Coordination

Governments need coordinating with various agencies to seek their participation in the recovery programme and to utilize their resources and expertise. The success of a recovery programme depends upon the strength and effectiveness of coordination structure, particularly at the state level. Coordination leads to new initiatives and innovations and improves the quality and speed of the recovery programme.

At different levels, a coordination structure involves the following stakeholders:

(a) International Level

- i. International Financial Institutions (IFIs)—World Bank and the Asian Development Bank—provide loans and technical assistance for recovery and reconstruction programmes. In India, several recovery and reconstruction programmes at the state level have been supported by the IFIs.
- ii. The UN system, which supports recovery through its specialized agencies, is represented by the Resident Coordinator at the national level. Within the UN system, the UN Disaster Management Team supports the planning and implementation of recovery interventions.
- iii. A number of bilateral donors also provide assistance for recovery programme, though in the context of India, such assistance is on a limited scale.
- iv. A number of international NGOs have expanded their presence in the country and have supported recovery and reconstruction programmes through their regional and field-level offices.

For coordination with international agencies, the Government of India first decides upon the necessity of seeking assistance from multilateral and bilateral agencies and donors. Once the Government of India agrees to accept international assistance for recovery, the state-level institutions can coordinate with international agencies.

(b) National Level

- i. Central ministries, which include the Ministry of Home Affairs (MHA), Ministry of External Affairs (MEA), National Disaster Management Authority (NDMA), various infrastructure ministries and technical institutions of the Government of India, provide support for recovery through allocation of resources as well as provision of relevant expertise.
- ii. The private sector makes a significant contribution to recovery programmes through commitment of resources and expertise. It also leads to public-private partnership in the area of recovery, which is discussed later (section 5.7) in the document.
- iii. NGOs mobilize their own resources and work with communities in supporting various areas of recovery, particularly in the area of shelter and livelihoods. On account of their wide presence and effective outreach, a close coordination with NGOs is a prerequisite of a successful recovery programme.
- iv. Academic institutions provide technical resources in specific areas and support recovery programmes through surveys and studies.

(c) Local Level

- i. Local governments, including municipal councils and Panchayati Raj institutions (PRIs), participate actively in recovery programmes and provide support through provision of land, infrastructure planning, and creation of records.
- ii. Civil Society Organizations, Self-help Groups, and many other local organizations emerge as active stakeholders in a recovery programme. They coordinate with the district administration in different sectors and provide local support for the recovery programme.
- iii. Affected communities are the most important stakeholders in a recovery programme, and coordinate with governments, NGOs and the private sector on a continuous basis. Coordination with communities requires activation of several forums, which bring together various stakeholders.

In recovery, coordination brings independent stakeholders together and allows efficient allocation of resources and responsibilities. However, coordination does not mean integration of resources or systems. Stakeholders at the international, national and local levels maintain their own identity, set up their own programmes in their areas of work and specialization, and allocate budget for these interventions. However, they work together, securing more resources for

recovery, implement multi-sector interventions and encourage communities to participate actively in the programme. Coordination thus leads to the development of partnerships and networks among stakeholders.

5.6. Coordination Mechanisms

In a recovery programme, several types of coordination mechanisms can be set up, depending upon the nature of coordination and stakeholders. A coordination mechanism at the levels of policymaking, planning and implementation is helpful for developing consensus and resolving conflicts and disputes. Some coordination mechanisms that are functioning or that can be established in recovery situations are:

(a) Task Force/Empowered Committee

A Task Force/Empowered Committee can be set up at a high level in the government to develop recovery policy and programme. It could consist of elected leaders, administrators and key experts.

(b) NGOs' Coordination Committee (NCC)

The government can create a coordination committee at the state or district level to assist NGOs with their participation in recovery programme. In this forum, NGOs meet the government officials and resolve all the programme issues. It also provides NGOs with necessary support and facilitation.

(c) Inter-Agency Group (IAG)

IAG has emerged as a group of NGOs, interacting with the state governments, UN agencies and donors. It has become an important coordination forum for the NGOs working in the area of recovery.

(d) District-level Project Management Committee (PMC)

This committee can consist of district-level officials, NGOs and representatives of affected communities. A number of local issues related to recovery can be discussed at the level of PMC.

(e) Village-level Recovery/Reconstruction Committee (VRC)

A Village-level Recovery Committee includes local government officials, ground-level programme staff and representatives of affected communities. The VRC can meet often and discuss all aspects related to implementation of the recovery programme.

While too many coordination mechanisms could be counterproductive, a few representative coordination mechanisms can be made functional. These mechanisms must meet frequently and function consistently as this improves overall quality, efficacy and speed of the programme.

5.7. Public-Private Partnership

The private sector has played an important role in supporting previous recovery programmes across a number of states³³. Individual corporate groups and business associations such as CII and FICCI have provided financial and technical assistance for post-disaster recovery. With CSR as a mandatory provision in company law, the role of private sector in post-disaster recovery is expected to increase.

The private sector can be recognised as an important stakeholder through a Public-Private Partnership (PPP) framework. PPP is a formal arrangement whereby the government at all levels facilitates the contribution and participation of private sector in the recovery programme. This partnership can extend to include NGOs and communities working in the recovery programme. PPP should harness mutually supportive and reinforcing roles of these actors, thus bringing together policy, finance, technology, information and other physical assets in recovery. It should aim at promoting an integrated approach to recovery at the community and household level. The following elements of public-private partnership need to be emphasized:

- i. The private sector should indicate its interest in supporting recovery and reconstruction through a formal communication with the central/state government.

³³ For example, following the Latur Earthquake in Maharashtra, the 2001 Bhuj earthquake in Gujarat and the 2005 Indian Ocean Tsunami in Tamil Nadu.

- ii. In certain cases, where the private sector is not in a position to contribute directly to the recovery and reconstruction programme, it can make a financial contribution to the Prime Minister's Relief Fund or Chief Minister's Relief Fund or any other designated fund specifically set up for recovery.
- iii. A framework agreement can be signed between the state government and private sector, indicating the sectors of recovery that would be supported by this partnership and the resources and facilities that would be provided by private sector and government respectively. The agreement is crucial as it enables private sector intervention to be aligned with government's recovery policy.
- iv. PPP has the potential to leverage professional and technical capacities that exist in the private sector. Private sector can bring new technologies in the area of housing, infrastructure and social services, which can improve the quality of recovery.
- v. PPP can contribute to improving economic recovery, an area which has not received much attention. The private sector can provide enterprise-based support for reviving small businesses, livelihoods and other aspects of economic recovery. It can strengthen cash-based transfer in a recovery programme and improve financial inclusion during implementation, and organize training and capacity-building programmes with the support of government and NGOs.

5.8. Technical and Professional Skills and Expertise

As mentioned earlier (section 5.4) a recovery programme needs a pool of professional skills and expertise in diverse areas such as housing, urban planning, livelihoods, infrastructure development, procurement, financial management and disaster risk management. This could be determined based on the scale of recovery programme. Generally, there are five areas that need acquiring technical and professional resources:

- vi. Management Consultancy Support
- vii. Architectural and Engineering Services
- viii. Information & Communications Technology
- ix. Finance & Accounts Services
- x. Community Participation and Social Facilitation

In these areas, a number of professionals need to be hired and engaged for accomplishing sector-specific objectives within set timeframes. This creates significant capacity for undertaking project management, technical assistance, resource mobilization and community participation.

Recruiting professionals at a short notice can be challenging considering the procedures that need to be followed. In such situations, outsourcing becomes an important method for securing both individual and institutional expertise. For example, for specific deliverables requiring individual expertise, individual consultants can be engaged for a limited period. In contrast, for management or ICT support for the entire duration of the programme, a consultancy firm can be engaged for the longer-term. The government can also seek technical expertise from other government agencies on a deputation basis and engage academic institutions for providing specialized services. On-field support staffs – such as Junior Engineers or Social Facilitators – who provide local oversight may also be hired. For effective functioning, the state governments must provide recovery programme setups with autonomy and flexibility to recruit people as per programme needs.

These professional capacities built during a recovery programme need to be retained through recognizing recovery as a special programming area and developing a roster of experts at the national and state levels. Establishing and dedicating technical capacity for recovery and reconstruction at the national and state levels can also simplify organising assistance for small- and medium-scale disasters that may not require an independent recovery programme, but still need delivering substantive assistance³⁴ to affected people.

5.9. Community Outreach, Empowerment and Gender equity

Participation of affected people and communities increase programme effectiveness and recovery outcomes. Previous experiences of recovery programmes suggest that depending on the terms and ways in which communities participate, it

³⁴ The scale of this assistance would depend upon the quantum of losses and damage.

can improve their ownership and acceptance of the programme and its outcomes as the recovery components respond better to their needs, it can reduce corrupt practices as participation enhances transparency and accountability, and it can increase their confidence by strengthening their agency in the recovery process. At times, however, community participation may seem to slow the implementation process as people take time to assess their needs and express preferences. This time-consuming exercise may seem to clash with time-bound deliverables, and thus is often resented by programme managers. But when such community processes are overlooked in the haste for speedy programme completion, it often proves to be detrimental to its implementation and its outcomes. A recovery programme thus must ensure that it enables effective community participation as a key element of its implementation strategy and timeline.

Effective community participation can have different approaches adapted to the context and the scope of recovery programmes. For example, direct participation involves communities in all stages of programme cycle – assessment, recovery planning, implementation and monitoring. Consultative participation engages community representatives for seeking their inputs on programme design and implementation. These forms of engagement aim at providing communities with informed and improved recovery choices and implementing them based on individual, social and cultural preferences. This means that governments and other implementing agencies should be open to changing their recovery plans in accordance to communities' preferences. An appropriate approach to community participation would vary from one state to another state. However, it is important that such a participation is substantive, not tokenistic, and further, it must consult socially weaker sections of the society.

Such community participation exercises should also not be one-off. Instead, it needs to be a sustained, structured and organized process that addresses issues of recovery needs assessment, planning and design, project development and implementation, and programme monitoring. One way that can help sustaining this process is by setting up local facilitation centres or similar mechanisms through which communities are provided relevant information. Another way for structuring and organising this process is through formalised institutional approaches. There could be several options as follows:

- i. The Government may decide to appoint agencies that organize communities and arrange their interaction with the government agencies on a regular basis. An NGO or academic institution undertaking this task on behalf of the government is an example of the agency approach.
- ii. Communities may decide to organize themselves and seek their representation in various planning, implementation and monitoring committees. A Village Recovery Committee (VRC) is a good example of communities organizing themselves to engage with the government.
- iii. The Government may decide to constitute consultative committees at state, district and block levels, where community representatives are asked to participate.

As communities are heterogeneous – often comprising of people of different castes, religions and interest groups – it becomes essential to better understand the community structure, social relations and varied recovery needs of different groups. Community participation can thus be meaningful only when engagement processes move beyond the influential community members to include marginalized groups and ensure mechanisms for them to voice their opinions safely. This includes genuinely representing and engaging women in various interactions where they are able to highlight their concerns and provide inputs, which should influence the programme design. Community participation thus requires careful engagement, effective facilitation and transparent communication with affected communities.

5.10. Implementation Timeframe

The duration of a recovery programme depends on the scale of the programme. Previous recovery programmes implemented in India indicate that nearly all large recovery programmes, such as those in Maharashtra and Gujarat, took more than five years for completion; and smaller recovery and reconstruction programmes, such as those in Chamoli (Uttarakhand) and Jammu & Kashmir took about three years.

In terms of timeline, developing a recovery programme takes about three to six months. The subsequent year is utilised for establishing the institutional setup and professional capacities for programme implementation. Actual recovery implementation occurs during the second and third years. More urgent recovery components are prioritised for implementation and several residual components are implemented a little later in the programme. Various programme components can be synchronized in a way that the programme is implemented within three to five years. The early

recovery phase comprising of critical interventions should commence in the first three months of the disaster event and be completed within 18 months. Mid-term and long-term recovery can continue beyond three years. Early and adequate attention in the beginning of the programme to developing project management and implementation capacity can help complete recovery programme implementation within three to four years.

(A timeline for various phases of recovery programme can be created and inserted here).

5.11. Programme Monitoring and Evaluation (M&E)

Monitoring and Evaluation (M&E) of a recovery programme is essential for providing accountability and transparency necessary for assisting ongoing recovery processes and for guiding necessary changes for improving programme design. Monitoring and Evaluation of a recovery programme is an area, which is still evolving in India. State Governments prepare progress reports and conduct audits, but M&E is not yet a systemic practice. Most donors, international agencies and NGOs have internal M&E policies. However, there is no policy yet which mandates agencies to report programme results to governments or beneficiaries.

Furthermore, there is no standard M&E method that is tailored specifically to recovery programmes. Developing an M&E system and formulating indicators in the early stages of the programme is an important priority. Additionally crosscutting issues such as environmental conservation, women's empowerment and risk reduction need to be included in the M&E system, along with appropriate indicators.

Monitoring activities and results provide useful feedback for day-to-day management decisions, guide necessary adjustments in the programme and facilitate more informed communication with beneficiaries and other stakeholders. A recovery programme presents a dynamic situation, which requires that the programme be reoriented and adapted to the changing context. Acting on M&E results will increase the relevance, efficiency and effectiveness of a recovery programme.

The NDMA and SDMAs may undertake evaluation of the recovery programme.. The evaluation would be undertaken as independently as possible. The evaluation reports would guide the preparation and implementation of future recovery programmes. A select number of evaluations would be conducted every year to assess how the recovery programmes are being implemented across the country.

(a) Establishment of a monitoring and evaluation system

Establishing an M & E system involves defining **what** to monitor and evaluate (activities and outcomes), **when** to monitor and evaluate (timing and frequency), **how** to monitor and evaluate (tools and indicators), **who** will monitor and evaluate, and **how** to use the results. An effective M&E system for recovery should ensure that:

- i. Activity and outcome targets and indicators are defined within the recovery planning framework, e.g. the results-based recovery framework;
- ii. Key recovery targets, e.g. provision of houses, distribution of agricultural inputs and other livelihoods assistance, can be monitored easily;
- iii. Timing and frequency of M&E activities are clearly laid down and the human, operational and budgetary resources for M&E activities are provided;
- iv. Regular reviews and final evaluations of recovery activities take place; and
- v. Strategies and programmes are modified to reflect new realities on the basis of M&E.

(b) Monitoring Results and Activities in a Recovery Programme

Monitoring is a continuous activity that indicates whether activities are on track. It is recommended to monitor both results and activities. Results monitoring refers to the monitoring of recovery objectives and priorities. Results monitoring should ideally be done on a quarterly basis and be conducted or guided by the main implementing agency.

Monitoring results should ideally go hand in hand with reporting and activity monitoring. This contributes to establishing a good database and indicates whether activities and programmes can be executed as planned. It involves checking that resources (human, financial and material) and services are being used as planned, visiting sites and offices where programmes are being implemented and reporting on a frequent and informal basis.

Activity monitoring should preferably be done by all agencies (for their respective sectors and programmes) and be consolidated by the lead recovery agency. A critical component of M&E of recovery responses is monitoring the application of guiding principles in the recovery programme. Indicators to monitor these principles need to be developed.

Good Practice in Monitoring:

- Make monitoring part of the routine. Monitoring targets must form part of daily duties and be topics of regular discussions among managers, partners and other stakeholders
- Develop SMART targets: Specific, Measurable, Achievable, Relevant and Time-bound
- Monitor results, targets and activities
- Take monitoring results seriously and act upon them to modify plans as appropriate.

(c) Evaluating recovery programme

Evaluation is even newer to the government systems. In previous recovery programmes, no evaluations had been conducted. Systematic evaluation of recovery results achieved would highlight the lessons and prove useful for future recovery programmes. Documenting and discussing ‘what went well’ and ‘what did not go well’ will inform decision-makers and future recovery operations.

Chapter 6. Capacity Development and Information Management for Recovery and Reconstruction

The 15th Finance Commission, by dedicating a specific funding window for Recovery and Reconstruction recognizes it as a special programming area that is an integral part of the disaster management cycle. The preparation and implementation of a post-disaster recovery programme requires (i) consistent support and collaboration from technical experts in various areas – including housing, livelihoods, infrastructure, communications and financial management amongst others; (ii) effective and efficient utilisation of technology; and (iii) decision support and management systems. As both the Central and State Governments need to access and utilise such professional capacities for activities such as assessing damage and loss, developing recovery programme and implementing them in partnership with various stakeholders, these need to be developed as part of preparedness for recovery programming at the level of Central and State Governments.

Supporting such preparedness activities for recovery is an important function of the SDRF's Recovery and Reconstruction window. Some important activities that could be supported through this window are:

6.1. Capacity building of Stakeholders (Government officials, CSOs, Communities)

(a) Development of National, State and Local Capacities

Recovery requires several interventions, which include cash or food for work, livelihoods, and reconstructing houses and infrastructure. This requires institutional and professional capacities across various sectors attuned to post-disaster recovery needs, procedures and mechanisms. These capacities would be developed through training of officials in Central and State governments, national- and state-level NGOs and technical experts.

Also essential for effective post-disaster recovery is training key functionaries and staff from local administrations on relevant recovery practices. Such trainings can be organized for communities and building artisans as well on multiple aspects of the recovery planning.

All such capacity-building activities need to integrate crosscutting issues such as disaster risk reduction, gender equity, and environment so that recovery is more sustainable and empowering for the people who participate in the programme.

(b) Development of Training Programmes

The NDMA/NIDM would develop these training programmes on recovery and reconstruction. These training programmes would target all those working in post-disaster recovery. The training curriculum would include both the processes of and interventions in recovery programming.

(c) Development of Guidelines

The NDMA/NIDM would develop guidelines on various aspects of recovery interventions such as housing, livelihoods, health and education based on national experiences in recovery.

6.2. Setting up a National Recovery Resource Centre

To support and strengthen recovery practices, a National Recovery Resource Centre (NRRC) would be set up. The NRRC would consist of a core team and function from the NDMA. The NRRC's objective would be to strengthen professional capacity for post-disaster recovery through a number of functions, including:

- i. Setting up a roster of experts who have worked in various recovery sectors. Depending on the required expertise in a recovery programme, the NRRC would recommend relevant experts;
- ii. Setting up an arrangement through which the roster of experts can be engaged by the Central and State Governments without going through a procurement process;
- iii. Supporting the Central and State Governments in conducting the PDNA with its experts drawn from the roster;
- iv. Supporting disaster-affected states in preparing recovery plans for various sectors – housing, infrastructure, livelihoods, and social services, and provide relevant technical support for various aspects of implementation;
- v. Reviewing and evaluating recovery programmes and providing feedback to the Central and State Governments.

In addition to these programme-related functions, the NRRC would organise its own learning activities through documentation of recovery programmes, convene workshops and conferences, and publish on different aspects of recovery. It could also provide policy-related support to the Central and State Governments on issues related to recovery.

6.3. Information Communication Technology (ICT) in Recovery

A recovery programme should seek the support of ICT companies and experts for different functions such as preparation of a recovery programme, programme management, information dissemination and monitoring. Internet and web-based applications, remote sensing and GIS applications, mobile communications and social media are important channels of information management and dissemination in a recovery programme. Developing ICT capacities in these areas enhance the efficiency of recovery programmes and enable different stakeholders to engage with various aspects of the programme more effectively.

A recovery programme needs to set up a web-based platform through which data, maps and information can be shared with all the stakeholders. Physical and financial progress achieved in a recovery programme should be communicated through ICT systems, to improve the efficiency of the programme and encourage transparency. Critically, the web-based systems should be used widely to disseminate all the relevant information.

At the community level, facilitation centres should be set up for communities to become more informed about the programme and engage in active dialogue about various aspects of programme, thereby giving them more ownership of the recovery initiatives. As social media is growing rapidly in India, people should be encouraged to interact through digital platforms and provide feedback to government and other implementing partners. With mobile communications becoming extensive, a number of services could be provided through mobile and smart phones (private individual donations, cash transfers to the affected communities, EWS etc.).

6.4. Decision Support Systems (DSS) including Databases:

In view of its complexity of a recovery programme, implementing institutions must set up a Decision Support System (DSS), including a Management Information System (MIS)³⁵, databases, and technologies such as remote sensing and GIS, which supports a recovery programme. The DSS would provide information on estimates of damages and losses, donor and implementing agencies, type of assistance (financial, housing, facilities, materials, equipment or personnel) and sector-specific recovery interventions. A robust DSS is an important component of an effective institutional set up for recovery.

A recovery programme should have dedicated in-house capacity to maintain the DSS through the period of implementation and provide necessary data and inputs in the form of statistics, maps, images and other forms of information. It is an essential aide for effective oversight of the recovery programme and should be provided with necessary support and resources.

6.5. Documentation of Recovery and Reconstruction Programmes:

A recovery programme should benefit from similar past programmes, best practices and lessons. In this respect, the NDMA and SDMAs should create a database and knowledge sharing platform of past recovery programmes, especially the more complex ones. This forum should make recovery learning accessible and sharing feasible for practitioners, researchers and the public through a range of data and documents (such as progress reports, financial information and roster of experts) on various aspects of recovery programmes.

In conclusion, capacity development and creation of various information sharing platforms is central to a successful recovery programme. This should be considered as a dynamic process, with skills being upgraded based on capacity requirements and information being updated and made available to all stakeholders on a continuous basis. This is essential even beyond the duration of the recovery and reconstruction programme due to its implications for similar future initiatives. Appropriate resources therefore need to be allocated for this purpose from the Recovery and Reconstruction window.

³⁵ MIS is a system of collecting, updating, and reporting data on the physical and financial progress of the recovery programme. It requires a flow of data from the field where the recovery programme is being implemented. The data needs to be collected and aggregated at the level of the programme. It requires computers, communication lines, software support, and data management skills to develop and maintain MIS. Without an effective MIS, it would be difficult to monitor the programme, and make necessary adjustments.

Chapter 7. Operational Guidelines for Release of Assistance – Recovery and Reconstruction Window

7.1. Post-disaster Needs Assessment

The Finance Commission has recommended that the State Governments conduct PDNAs after each disaster. If the disaster occurrence is on a large-scale, the State Governments can seek the support of the Central Government in conducting the PDNAs. The PDNA methodology as developed by the Central Government has been discussed in the earlier chapter.

The PDNA estimates the cost of damage, loss and recovery needs. However, the PDNA estimates do not create an obligation for the State Government to meet the entire cost of recovery and mobilize the full resources. The PDNA estimates provide the State Government with baseline data for planning and prioritizing various components of a recovery programme.

7.2. Allocation of Resources

The State Government allocates resources as per sector-specific recovery needs established in the Recovery Plan. The time and resources required for its implementation may be determined by sector-specific implementing agencies. Accordingly, the fund flow for these sectors for each year of implementation may be planned. This exercise of allocating resources for recovery indicates the total resource requirement for each year of recovery implementation. From amongst other budgetary sources, the SDMA has information on resources available under the SDRF for the next few years. It can thus allocate year-wise resources from the SDRF for the recovery plan, assuming that the implementation timeframe exceeds one year.

As discussed in chapter 3, the State Government would decide to pool its resources for recovery through different budgetary sources. While raising these resources, the SDMA would first draw upon the Recovery and Reconstruction window of SDRF. The SDMA may also seek the assistance of non-governmental stakeholders in financing recovery and reconstruction. It is the SDMA that would take the decision to approach the NDRF for additional resources for recovery and reconstruction. The SDMA would take the decision on the basis of its existing and future commitments from the Recovery and Reconstruction window.

7.3. Request for Allocation of Resources from the SDRF

The District Disaster Management Authority (DDMA) would prepare the recovery plan / framework for the disaster that has occurred within the district. The DDMA can seek assistance of the SDMA or any other organization for preparing the recovery plan / framework. As per the plan, the DDMA would request the SDMA to consider various components of the Recovery Plan and sanction assistance from the Recovery and Reconstruction Window. The SDMA would release assistance for different components of the Recovery Plan as per annual expenditure projections.

Where more than two districts in a state are involved in developing a recovery plan, it is the responsibility of the SDMA to finalize the recovery plan in coordination with the concerned DDMA's. The SDMA should prepare the component-wise plan with year-wise expenditures, and allocate resources to the districts based on the plan.

7.4. Request for Allocation of Resources from the NDRF

When the SDMA has allocated resources for recovery and reconstruction in the current and future years in a way that it has exceeded its allocation available under this window of SDRF, it can apply for funds under the same window of the NDRF. The SDMA is required to certify that its total commitment of resources on recovery programmes has exhausted the resources available with the Recovery and Reconstruction window of SDRF, and hence it would submit an application for access to NDRF funds available under this window.

The SDMA would present its Recovery Plan to NDMA, while applying for the NDRF resources. It would request component wise allocation from the NDRF and its annual projections for expenditure. For each component that needs to

be funded by the NDRF, the SDMA must commit at least 25 percent of resources from its own SDRF over the entire period of implementation. Such a State commitment is necessary to ensure joint responsibility for all the components being implemented.

After the SDMA presents its Recovery Plan for allocation from the NDRF, the NDMA reviews the plan and the request for total allocation. While reviewing the plan, the NDMA reviews the cost structure, implementation plan and time-frame for each component for which the SDMA has requested the resources. Both the MHA and NDMA would also review the committed resources under this window of the SDRF and assess the available State resources for recovery and reconstruction. After reviewing the Recovery Plan, the NDMA and the MHA would jointly prepare a recommendation for the allocation of resources from the Recovery and Reconstruction window of the NDRF. The recommendation is made for each component, including the year-wise allocation.

The recommendation for allocation of resources from the NDRF would be processed by the MHA, which would then place the recommendation for allocation before the High-Level Committee (HLC) constituted for the NDRF. The HLC would approve the allocation from the NDRF, upon which the MHA would release the resources as per the plan approved.

Norms of assistance, the schedule of rates and financial estimates, which are applicable to the recovery components, would be the same for the NDRF as well as SDRF. If the State Governments exceed these norms, the assistance from the NDRF would not be admissible for additional expenditure on account of revised assistance.

7.5. External Assistance for Recovery and Reconstruction

SDMAs may decide to seek external assistance for the purpose of recovery and reconstruction following a disaster event. For such international assistance, the SDMA needs to follow the guidelines for external assistance prepared for this purpose.

In those cases where the SDMA seeks to secure loan assistance from the IFIs (the World Bank and ADB), the SDMA and NDMA need to make a joint determination that the resources available with the Recovery and Reconstruction window of SDRF and NDRF are not sufficient to meet the cost of recovery and reconstruction. Once such a determination is made, the SDMA may request the Government of India to approach the IFIs for securing the loan assistance.

7.6. Release of Assistance

After the assistance is sanctioned through the SDRF and NDRF, the amount is released to various implementing agencies as per the approved components of the recovery programme. While releasing the amount, year-wise expenditure projection is taken into account.

In the case of NDRF, the amount would be released to the SDMA, which is responsible for utilization of the assistance. The SDMA would prepare the progress report and issue the utilization certificate. In those cases, where the NDRF assistance would be released to a Central agency, the progress report and the utilization certificate would be issued by the concerned agency.

In the case of SDRF, the SDMA may release the assistance to the DDMA, which may further disburse the amount to the implementing agencies. The SDMA may also release the assistance to state agencies for implementing recovery. The DDMA and concerned State agencies which receive assistance would be responsible for submitting the progress report as well as issuing the utilization certificate.

7.7. Release of Instalments and Cost Escalation

The assistance would be released in two or three instalments, depending on the total amount allocated and the time-frame of the recovery programme.

The release of subsequent instalments would depend upon the progress of the recovery programme as well as the expenditure incurred. In case of inadequate implementation progress or the expenditure not as per the projection, the subsequent releases may accordingly be reduced.

In all those cases, where the amount has been sanctioned from the NDRF, if there is a cost escalation on account of delay in the implementation or any other reason, the SDMA or the recipient agency may need to apply for the increased allocation from the NDRF. The MHA and NDMA may review the reason for cost escalation. If such a cost escalation can

be supported on valid grounds, the HLC can approve the increase in NDRF allocation. Generally, all recovery programmes need to be implemented in a time-bound manner, and cost escalation avoided.

7.8. Review Mechanism

All recovery programmes supported through the SDRF and NDRF should be periodically reviewed. The NDMA and SDMA need to constitute review mechanisms for these recovery programmes. These mechanisms need to consist of the representatives of concerned agencies, experts and external reviewers. The process of review should be formal and all the review reports be maintained as part of monitoring of the programme progress.

A review should include physical visits to the areas of recovery, and feedback from the participants in the recovery programme. It could include household surveys, technical inspections, video films, and documentation of the progress of the recovery programme. Visit reports need to be prepared and shared with the concerned agencies.

To monitor the utilization of NDRF assistance, the MHA and NDMA may send Central teams to recovery programme areas to assess the progress of the implementation. The review reports submitted by these teams would guide the subsequent release of assistance from the NDRF.

7.9. Changes in the Scope of Recovery Programme

As a result of the review of the recovery programme, if certain changes need to be made to the scope of the recovery programme, the review mechanisms can recommend it. The SDMA can approve such a change, however if a recovery programme is assisted through the NDRF resources, MHA and NDMA need to be informed about the changes to the recovery programme.

If on account of such a change, the need for assistance decreases, the assistance from the NDRF would be reduced. If the need for assistance increases, the SDMA needs to provide justification for such an increase, which would be reviewed by the MHA and NDMA, as mentioned above.

7.10. Social and Technical Audit

A key implementation challenge in recovery programmes is controlling corrupt practices and increasing transparency. This requires instituting an audit system, which includes public auditing of procurement and disbursements, carrying out a technical audit of the works carried out and conducting a social audit of the benefits delivered. While financial audit of accounts and expenditure is well-established in most countries, technical and social audits are relatively new evolving concepts. Most large recovery programmes³⁶ include technical audits for identifying construction defects and shortcomings, which need to be addressed and resolved, followed by submitting a compliance report on all the technical shortcomings for the purpose of review and acceptance. Social auditing evaluates the social, economic, and environmental benefits by involving all the stakeholders—NGOs, homeowners, donors, and the implementing agency. Whilst social auditing has been advocated, it has not yet become an integral part of recovery and reconstruction programmes.

In addition to reviews, the SDMA and NDMA must recommend social and technical audits of recovery programmes. These specialized audits would be conducted to improve accountability and transparency in the programme implementation. Social audit would be undertaken by institutions skilled in social survey tools. The audit would measure the recovery programme on account of various social indicators such as participation effectiveness, benefits to vulnerable groups and improvement in quality of life indicators.

Technical audits would be supported by engineering and technical firms specializing in various sectors of construction. These audits would provide reports upon inclusion of and compliance to adequate technical standards, BBB and resilience features, and compliance to all the technical issues pointed in various inspections.

The cost incurred on social and technical audits would be met through the programme costs. The audit reports would be placed before review mechanisms that guide the release of further assistance from the SDRF and NDRF.

³⁶ Such technical audits were undertaken in the earthquake reconstruction programmes in Maharashtra and Gujarat.

7.11. Programme Completion Report

At the end of the recovery programme, the DDMA and SDMA need to prepare a Programme Completion Report. The report would include all the physical and financial details of the programme. In addition, it would provide details on the quality of implementation, the level of beneficiaries' satisfaction, key lessons learnt, and overall success of the programme. The NDMA may prepare a template for the Programme Completion Report.

Section 2

Chapter 8. Key Interventions for Recovery and Reconstruction

A critical aspect of recovery and reconstruction is the implementation of *key recovery interventions*, which would be supported through the funding window for Recovery and Reconstruction. These recovery interventions are key to household and community recovery. Based on damage and loss assessment, these interventions need to be planned in the following thematic areas:

- a. Physical recovery: Housing, Physical and Community Infrastructure
- b. Economic recovery: Agriculture, Livelihoods, Businesses and Enterprises, and Markets
- c. Social Recovery: Health, Education, Gender and Social Inclusion
- d. Cross-Cutting Issues: Disaster Risk Reduction, Environment, Social Protection, Governance

While planning these interventions, State Governments would adopt the BBB approach to recovery. The approach, which consists of improved standards and specifications, would increase resilience at the household and community level. A recovery programme must include resources, technologies and expertise to improve houses and infrastructure and rebuild resilient livelihoods. A recovery programme is always development-oriented in design and implementation. It should transfer resources and skills to the people who suffer socio-economic deprivation and improve their quality of life.

While implementing recovery programmes, it is important to distinguish between early recovery interventions that take place in the relief phase and full recovery interventions that are implemented subsequently. The following sections will articulate various interventions and guidelines across sectors in these two distinct phases of recovery and reconstruction. Cross-cutting issues will also be included for a holistic and sustainable recovery.

In a recovery programme, there are several long-term issues addressed. These issues address long-term vulnerability and bring about a change in governance and regulations. However, these issues are mostly in nature of mitigation measures. These measures cannot be supported through the Recovery and Reconstruction window, and need to be presented to the NDMF / SDMF.

Key components of recovery under three thematic areas are presented below:

8.1. Physical Recovery: Housing, Physical and Community Infrastructure

(a) Housing

(i) Early Recovery

Reconstruction of permanent housing could take several years as it usually involves many complex issues that require time to be resolved such as removal of debris, supply of building materials, relocation planning and securing land rights. Therefore, temporary shelters play an important role in providing immediate space for the people to reorganize their lives and revive their livelihoods, while disaster needs are still being assessed. Early recovery measures to facilitate the swift provision of these shelters are as follows:

- i. The State Government needs to conduct an assessment of shelter damages, capacity and needs of affected communities.
- ii. The State Government facilitates the construction of temporary shelters through the provision of building materials to every homeless family to set-up temporary shelters on their own--
 - Frame: wooden poles, bamboos or other readily available local materials.
 - Partitions and Walls: woven, thick plastic sheets or corrugated sheets, low-cost tent materials, thick fabric;
 - Roofing: corrugated sheets; and
 - Flooring: may/may not be provided (availability of resources). Communities may use locally available material for this purpose.

- iii. Government procurement of contractor services can be used for temporary shelter construction. Under this arrangement, the government has the responsibility of providing an appropriate site for temporary shelter construction. This option is generally more expensive.
- iv. The government may ask the assistance of NGOs and other civil society organizations to construct temporary shelters. These NGOs / CSOs may provide the material themselves, and the government may cover any shortfall.
- v. Provision of cash grants can promote flexible solutions and may allow families within a community to pool resources and set-up common temporary shelters.
- vi. Additional small cash assistance could be provided to each family to support/facilitate their construction efforts.
- vii. The government must ensure provision of basic civic amenities, including water supply, sanitation, schools and health care facilities.
- viii. The government must identify networks of implementing partners, and assess capacities of local building material producers and markets.

Guidelines for Early Recovery Shelter Planning

- The distance between temporary shelters and former homes should be minimized to allow displaced and affected people to maintain social networks and livelihoods, and protect their land and property.
1. Temporary shelters must be planned considering activities essential to daily living such as lands, work places, school and health facilities, and access to critical infrastructure.
 2. Temporary shelters should be designed in accordance with communities' cultural, social and livelihood needs.
 3. The location of temporary housing is important, particularly where land is scarce. Sites with uncertain tenure should be consistently avoided.
- Temporary shelters must be upgradeable, reusable and recyclable.
 - Site options to communities must be provided for temporary shelters to protect the community's cohesiveness.
 - Temporary shelters for villages or communities should be constructed at one place, so that basic amenities provided can serve all shelter occupants.

Implementation Mechanism	
Institutions	SDMAs, Housing Agencies, PRIs, Municipalities
Partners	NDMA / MHA, International, national and local NGOs, CSOs
Funding	NDRF and SDRF, IFIs, UN Agencies; CSR Funds; and Individual donations
Modality	Building Materials: Government can procure materials through its own resources or it could be provided by partner agencies. Temporary shelter set-up: constructed by beneficiaries or through contractors contracted by the government. Basic Amenities: provided by the Government, contractors or through project NGOs.

(ii) Medium and Long term Recovery

A housing recovery strategy for permanent shelters must be based on the PDNA estimates of damage, capacity and needs in the housing sector. It should also take into account the availability of land, land tenure, building materials, provision of civic and community infrastructure, and risk reduction measures. The important considerations for permanent housing reconstruction are as follows:

- i. Conduct a detailed PDNA to inform the shelter reconstruction strategy.
- ii. In case of relocation, secure a viable site based on its hazard risk assessment, soil quality, hydrology, topography, geology, land security rights and the environmental impact of construction on the site.
- iii. Provide financial assistance as determined through the policy to beneficiaries for house construction.
- iv. Provide technical assistance to guide communities to select appropriate building materials, optimally utilize available resources, to design culturally sensitive and disaster resilient settlement plans and shelters that minimise the environmental impact of construction.

- v. Train local masons and artisans in earthquake, cyclone and flood resistant, and sustainable building techniques.
- vi. Promote and build capacity of communities for building shelters and provide community- based shelter support to people with special needs.
- vii. Provide a range of shelter options to suit the diverse needs that arise due to the scale and pattern of damage, rural and urban settings, large extended families, single-headed households, elderly, safe and unsafe locations and on-site construction or relocation.
- viii. Provide sanitation facilities, water and electricity supply through solar energy in all houses.
- ix. Provide additional financial assistance to beneficiaries to incorporate risk reduction features in house repairs, reconstruction and retrofitting.
- x. Identify alternative and affordable building technologies for repair and reconstruction that will improve building and planning standards and provide access to affordable and environmentally sustainable building materials.
- xi. Promote local production of environmentally friendly materials to reduce any adverse environmental impact of the construction process and provide local employment through labour-intensive production methods. If done appropriately, this can also reduce construction costs.
- xii. Promote Technology Demonstration Projects as an effective means to show communities the advantages of using appropriate construction techniques and incorporating disaster resilient features in a building.
- xiii. Create a shelter hub (two or three Gram Panchayats) that is managed by an engineer and two social facilitators with the following responsibilities-
 - a. Organize training programmes for village-level engineers and masons.
 - b. Act as the bridge between the district officials and the beneficiaries.
 - c. Monitor reconstruction programmes and manage information flow.
 - d. Set up a Support Unit for SDMAs in districts as required that is managed by the District Project Officer with the following responsibilities-
 - e. Develop/maintain databases and flow of information at the district level.
 - f. Support the district administration in project management, which includes reporting, communication and grievance redress.
 - g. Appoint adequate site engineers, social workers and raj mistris (master craftsmen, expert masons, construction supervisors etc.) at the Village Panchayat level.
 - h. Coordinate with implementing partners, and assess capacities of local building material producers and markets.
 - i. Identify national building regulations in housing recovery and review building codes and enforcement.
 - j. Set shelter reconstruction standards in accordance with national and state building codes, previous recovery programmes and Sphere Standards³⁷.
 - k. Prepare Gram Panchayat **level plans** in consultation with the community.

Guidelines for Mid-Long Term Recovery Shelter Planning

For Site Selection:

- Communities must be involved in risk mapping, decision-making concerning rebuilding in-situ or relocation.
- The trade-off between livelihoods and relocation to a safer site must be balanced carefully.
- Access to appropriate livelihood opportunities, adequate medical and public health services, safe and affordable food, drinking water, affordable basic utility services must be ensured.
- Impact of new settlement construction on surroundings must be evaluated before construction.
- The distance between relocated settlements and former homes should be minimized to allow communities to maintain social networks and livelihood.

For Settlement Planning:

- Original community settlement patterns & proximity to communities' livelihood options must be considered.
- Settlements should be protected from immediate hazards.
- Pre-disaster built environments must be rehabilitated or reconstructed, in cases where it is possible.
- An integrated approach must be adopted in shelter reconstruction which links shelter with other basic survival

³⁷ <http://www.spherehandbook.org/en/contents-4/>

needs such as water and sanitation, health and livelihood. Various Central and State government programmes must be converged for overall sustainable habitat development.

For House Design:

- Communities' cultural, social and livelihood needs must be reflected.
- Women participation in design stages must be encouraged.
- Design must allow for future incremental growth for adapting to increase in family sizes and changing needs.
- Communities should be able to introduce their design features in the chosen design.
- Social mobilisation must be prioritised to ensure complete community ownership, cultural appropriateness and an understanding of structurally safe multi-hazard resistant technical features.

Building Materials

- Locally available materials that are cost-effective and environmentally friendly must be used.
- Good quality building materials should be selected.
- Recycling and productive use of construction materials extracted from the debris or rubble after the disaster must be taken into consideration.
- Local production of sustainable building materials should not be overlooked.

Construction Technologies

- Sustainable construction technologies must be promoted which are climate, culturally and socially appropriate, affordable, use local materials or encourage local production of sustainable materials that minimise constructions' negative environmental impact.
- Disaster resilient technology must be adopted. All construction must follow updated Indian Standard (I.S.) codes, regardless of whether the local building byelaws incorporate them or not;
- Compliance of housing construction with Local, State and National building codes must be ensured.

Implementation Mechanism	
Institutions	SDMAs, Housing Agencies, PRIs, and Municipalities
Partners	NDMA / MHA, International, national and local NGOs, CBOs, UN Agencies
Funding	NDRF / SDRF, IFIs, UN Agencies; CSR Funds; Budgetary allocations; Social Housing Programme such as PMAY and other State funded housing programmes; 10% flexi-funds available in Ly Sponsored Scheme (CSS); micro-credit through local banks; beneficiaries' own savings; and individual donations.
Modality	Building Materials: The Government will not procure building materials, but facilitate it. Building material producers may be identified to make materials available at regulated prices. House construction: community-based construction management and owner-driven housing reconstruction must be encouraged. This approach is more likely to ensure better quality control of materials and construction and induce much deeper ownership of housing settlements. It can also help establish a culture of hazard resilience in the community that continues beyond the reconstruction programme. Payment: In instalments through individual beneficiaries' bank accounts.

(b) Critical and Community Infrastructure

Critical infrastructure refers to those large systems, assets and networks which are essential for the functioning of a society and economy. In the context of disasters, critical infrastructure refers to roads and bridges, railways, power, and telecommunications network. These are big systems, which when impacted by disasters, can disrupt businesses, markets and economic activities. They can also disrupt access to many essential services and facilities such as schools and hospitals.

Critical infrastructure is supported and maintained by specialized departments and agencies, and utility companies, which have the necessary technical and financial resources for restoring these systems and reconstructing them following a disaster event. Recovery and reconstruction of these infrastructure facilities is generally entrusted to these specialized entities.

Critical infrastructure is a highly interdependent system. Telecommunications system would need a functioning power system to energize its communication switches. Similarly, transportation system relies on electrical power for its signals and switches. The drinking water supply system relies on resumption of electric power for its lift stations and control

systems. Given the interdependencies among these systems, it is important all the agencies and utility companies work on resuming their services as early as possible.

Community infrastructure refers mainly to small-scale and low-cost basic physical structures, technical facilities and systems at the community level that are critical for sustaining lives and livelihoods of the community. They are usually built over time through community-led initiatives. These include community access roads, pavements and pathways; minor structures such as drainage, culverts, foot-bridge, small embankments or protection walls and small earthen dams etc.; small market places and infrastructure within market grounds; water reservoir and water sources, supply pipes, ponds and reservoirs; and solar home systems for electrification.

(i) Early Recovery

The key early recovery interventions for critical infrastructure are as follows:

- i. Clear debris / rubble and devise alternative ways of accessing these facilities and services.
- ii. Set up technical teams for each infrastructure network to work on restoring systems.
- iii. Re-erect poles and towers, and replace all the spares so that power and telecom services can quickly resume.
- iv. Provide necessary local support to Public Works Department to repair roads and bridges.
- v. Facilitate power and telecom companies to repair their networks and resume their services.
- vi. Inform the people in the affected areas on the resumption of infrastructure services
- vii. Restore all the key infrastructure services and facilities at the earliest.
- viii. Make alternative arrangements for those systems, which are dependent on power, if the power systems break down for a longer period.
- ix. Develop recovery plans for all critical infrastructure based on the BBB approach.

The key early recovery interventions for community infrastructure are as follows:

- i. Clear debris/rubble, restore and upgrade community road networks and community sites to allow access;
- ii. Restore/repair critical communication facilities to support recovery activities;
- iii. Repair and purify drinking water sources, clean ponds and restore sanitation facilities to mitigate secondary health hazards;
- iv. Restore drainage and small scale water resource infrastructure;
- v. Restore minor infrastructure in the community and support spontaneous community efforts in this process;
- vi. Provide financial and technical assistance to communities;
- vii. Train local communities and local government institutions, particularly in small-scale infrastructure restoration;
- viii. Begin to develop more systematic medium and long-term recovery plans for damaged community infrastructure including technical designs and drawings through a multi-stakeholder approach that engages affected communities in the survey and prioritization of damaged infrastructure;
- ix. Support local authorities engaging with affected communities in order to prioritize community infrastructure rehabilitation using community mobilization methods; and
- x. Implement activities that support the immediate resumption of community livelihood and economic opportunities.

Guidelines for Early Infrastructure Recovery

- Maintain an inventory of critical equipment and spare parts for repairing networks and services
- Prepare continuity plans for infrastructure systems
- Labour intensive technologies must be used to encourage local employment.
- Local materials and resources must be promoted in all community restoration projects.
- Recycling and productive use of construction materials extracted from the debris or rubble after the disaster must not be overlooked.
- Women must be encouraged to participate in restoration of community infrastructure.
- Early recovery activities must correspond to long-term sustainable development objectives as set out in local and national ^[1]development plans and programmes.

(ii) Medium and Long term Recovery

Critical medium and long-term infrastructure recovery interventions are as follows:

- i. Develop recovery and reconstruction plans for all the infrastructure systems.
- ii. Use the Schedule of Rates established for the State to develop the recovery plan for roads and bridges.
- iii. Repair and reconstruct roads and bridges, applying the principles of BBB, thus providing improved specifications. Expand capacities of these systems where it is necessary.
- iv. Use appropriate mitigation measures against floods, cyclone and landslide while reconstructing these infrastructure like roads and bridges. These structures should not obstruct water channels.
- v. Introduce hazard-resilient features in both electricity and telecommunication systems, which could include steel poles, underground cabling, etc.
- vi. While reconstruction of roads and bridges can take time, most of the recovery and reconstruction programmes need to be implemented within a short period of time.
- vii. Establish labor-intensive repairing, ^[1]upgrading and reconstructing infrastructure programmes;
- viii. Facilitate planning and redesign of various damaged critical infrastructures such as hospitals, schools, public transportation hubs, ports etc.
- ix. Repair, reconstruct and upgrade priority access roads and bridges.
- x. Repair and reconstruct culverts, retaining walls and stabilise hill slopes where necessary.
- xi. Restore community-based water supply, sanitation facilities including community wells, ponds and water supply sources, water treatment plants and water distribution pipes.
- xii. Rehabilitate and reconstruct drainage systems and infrastructure such as small jetties, irrigation channels, pump houses etc., flood protection installations, sea defences wherever necessary.
- xiii. Set-up, install or improve facilities that are environmentally friendly, energy efficient and that reduce risks.
- xiv. Establish an improved solid waste management system that can contribute significantly to environmental management.
- xv. Restore and strengthen ICT and Community Early Warning Systems.
- xvi. Provide capacity development and training to local government institutions, NGOs and CBOs for coordination, planning, implementation, sustainability and participatory monitoring of infrastructure and associated programmes.
- xvii. Train local masons and workers in community infrastructure restoration
- xviii. Promote community awareness for safety standards, disaster risk reduction and build a culture of resilience at the community level.

Guidelines for Mid-Long Term Infrastructure Recovery

- For critical infrastructure to be accessible to and useable by all stakeholders, it is imperative that transportation, power, telecom, water supply and sanitation facilities are rehabilitated and/or constructed.
- Critical and community infrastructure is a context specific process and should comply with legal provisions and standards applicable for the affected regions.
- Design considerations must be reflective of existing disaster risks and should make necessary provisions for making the infrastructure disaster resilient.
- All community and critical infrastructure/buildings must be disabled-friendly.
- Reconstruction of roads should not be seen in isolation, but rather in the context of a transportation network that connects local communities to a larger districts.
- Regular supervision during project implementation must be done to assess construction and contractor performance quality.
- In designing improved infrastructure system, livelihoods of workers dependent on older systems must be considered, e.g. in improving solid waste management systems, interests and livelihoods of informal workers in the recycling industry must be considered.
- Participation of female workers must be encouraged.
- Labour intensive techniques must be promoted where appropriate, considering local practices & resources.
- Undertake rehabilitation in close partnership with local authorities, community leaders, NGOs and CBOs.
- DRR measures must be incorporated in the design and construction of infrastructure.

Implementation Mechanism	
Institutions	Department of Public Works Department, Electricity Companies, Telecommunications companies, SDMA, Ministry of Drinking Water and Sanitation, Ministry of Urban Development, Ministry of Rural Development, PRIs, Municipalities
Partners	International, national and local NGOs, Community Based Organisations, UN Agencies
Funding	Budgetary Allocations, SDRF and NDRF, IFIs; CSR Funds; Micro-finance Institutions; Community pooling of resources; Commercial bank loans; Convergence with and State Schemes such as Pradhan Mantri Gram Sadak Yojana for roads, Jal Shakti Abhiyan
Modality	Material procurement: Departments and agencies procure building materials following the procurement system laid down. Restoring infrastructure: Wherever possible, improved specifications and hazard-resistant features to be used in critical infrastructure. Labour intensive methods must be used to encourage local employment in rebuilding community infrastructure. MGNREGA can facilitate cash-for-work conditions for infrastructure restoration. Maintenance: In rural areas, community-led maintenance, with support from Village Panchayat may be encouraged. However, maintenance funds must be mobilised. In urban areas, municipalities must maintain infrastructure. Corresponding Ministry or Department must maintain state level infrastructure.

(c) Cultural Heritage Buildings

Cultural heritage buildings include monuments, archaeological sites, historic urban areas, vernacular heritage such as places of worship and houses. Following a disaster, cultural heritage property could be more at risk from secondary factors such as temporary settlements, reconstruction and infrastructure restoration activities than the actual disaster itself. Conservation of cultural heritage buildings can help a community to protect and preserve its history and environment, provide a sense of identity and continuity following a disaster³⁸.

(i) Early Recovery

Key interventions to support the early recovery of cultural heritage are as follows-

- i. The government must mobilise the lead agency for post-disaster heritage conservation.
- ii. The lead agency must collaborate with NDMA/SDMA to ensure inclusion of heritage buildings in the PDNA.
- iii. Identify and prioritise heritage buildings that require conservation during recovery and reconstruction in consultation with the lead agency, local government and community.
- iv. Document heritage structures according to building types.
- v. Develop a classification to classify buildings based on the scale of damage as well as record damages for each building and plot these on available drawings.
- vi. Conduct specific assessments of cultural heritage housing and community buildings or alternatively, include heritage and conservation experts in housing damage assessment teams.
- vii. Decide on an appropriate strategy – Repair, Structural Renovation, Seismic Strengthening/Retrofitting.
- viii. Assess availability of local resources to address post-disaster cultural heritage risks and damages.
- ix. Articulate building design options that respect historical and heritage values.
- x. Ensure provision of temporary measures for safety of heritage buildings such as strutting, temporary roofing, protection of integral art or cultural property by providing storage spaces.

³⁸ Jha et al. 2011, *Safer Homes Stronger Communities: Chapter 11: Planning Reconstruction: Cultural Heritage Conservation*.

(ii) Medium and Long term Recovery

Key steps in mid-longer term recovery of cultural heritage buildings are as follows-

- i. Conduct site and geotechnical investigation to inform the structural strengthening strategy for heritage buildings.
- ii. Prepare construction drawings and detail estimates for making funds/resources available.
- iii. Employ local craftsmen in restoration of heritage buildings. This can restore local livelihoods and ensure continuity and practice of traditional building techniques.
- iv. Adopt simple measures for non-structural³⁹ mitigation such as mounts, clips, adequate anchors and bracing, padding and special box for storage.
- v. Develop illustrative guidelines for local construction artisans and craftsmen to provide the necessary technical concepts and know-how. This guideline can also form the basis for future training purposes.
- vi. Provide technical assistance for assessment of damages of cultural heritage buildings, trainings, documentation and retrofitting through the support of national and international technical experts and institutions.
- vii. Conduct trainings and capacity building programmes for construction professionals, and artisans and craftsmen on hazard-safety of heritage structures and vernacular housing.
- viii. Conduct trainings and capacity building programmes for conditional assessment, maintenance and repair methods for heritage structures and vernacular buildings through technology demonstration units.
- ix. Develop effective post-disaster heritage conservation plans and strategies.
- x. Provide incentives for conservation of vernacular housing during reconstruction process.

Guidelines for Recovery of Cultural Heritage Buildings

- Ensure that restoration, reconstruction and rehabilitation of surrounding buildings, and critical and community infrastructure do not encroach upon cultural heritage sites.
- The damage assessment team must be interdisciplinary and include archeologists, conservation architects, seismologists, engineers and social anthropologists.
- Ensure that temporary shelters, schools and health depots are located in a way that they do not cause any harm to cultural heritage sites.
- Ensure that during early recovery activities, such as debris removal and clearance, special care must be taken in heritage sites and buildings to avoid causing further harm.
- Encourage community participation to effectively protect heritage sites and monuments.
- Ensure use of authentic materials and skills for repairing and retrofitting heritage buildings.
- Ensure that new construction is built in harmony with the local culture and natural heritage.
- Select the method that has a minimum impact on the aesthetic and cultural value of the heritage building and protects its^[1] architectural/historic features.
- If a portion of the structure has to be removed or strengthened, the process undertaken should have^[2] minimal effect on the structure.
- There should be minimal change in the appearance of the building.
- All restoration and retrofitting activities of damaged cultural heritage buildings should conform to the regulation on 'Conservation of heritage sites, including heritage buildings, heritage precincts and natural feature areas'. (<http://www.urbanindia.nic.in/publicinfo/byelaws/Chap-8.pdf>)

Implementation Mechanism

Institutions	NDMA, SDMA, Ministry of Home Affairs, Ministry of Urban Development, PRIs, Municipalities, ASI, State Archaeological Departments, Municipalities, PWD
Partners	International, national and local NGOs, CBOs, UN Agencies, UNESCO, ICCROM, ICOMOS, ASI, Conservation architects, Structural engineers
Funding	NDRF / SDRF, Budgetary allocations, IFIs, UNESCO, CSR Funds, community funds.
Modality	Assistance from Specialized Agencies such as INTACH, Grants, Technical assistance

³⁹ Non-structural elements refer to contents of buildings and parts that are not part of the structural system. These include everything excluding columns, beams, floors, load-bearing walls, roof and foundation.

8.2. Economic components of Recovery

(a) Livelihoods and Small Businesses

Loss of work opportunities can be both due to the direct and indirect impact of disasters. Direct impacts, such as damages to assets (work places, equipment and inventory), normally occur in areas physically affected by disasters. Indirect impacts, such as breakdown of supply chains, finished products and services, can extend beyond the physically affected areas.

Livelihood losses can be particularly significant when they affect the marginalized, poor and excluded groups who may not have the means to cope with a reduction in income. It is therefore essential to prioritize speedy livelihood restoration of affected populations, based on a capacity and needs assessment that focuses on local economic resources and livelihood opportunities including labour market surveys and analysis. Mapping of pre-disaster economic activity in urban areas and pre-disaster agriculture conditions in rural areas must be undertaken (supported through technology such as Geographic Information System [GIS]).

(i) Early Recovery

Early recovery interventions focus on short-term economic activities that are essential to build self-resilience of affected communities and ensure provision of income to minimise dependency on others for basic food and shelter, borrowing from moneylenders at a high interest rate, reduce distress selling of remaining assets or migrating to other places. These include:

- i. Identify labour-intensive, or skilled jobs based on available opportunities and skill profile of the affected community.
- ii. Identify government agencies/NGOs/private sector companies that can assist in planning and implementing the livelihoods program.
- iii. Identify funding sources, including the SDRF and NDRF, available funds and duration over which livelihood interventions can and need to be supported.
- iv. Decide upon the wage structure and how it would be paid to the workers.
- v. Plan enabling mechanisms for programme implementation such as technical assistance, provision of credit, infrastructure support, market linkages, etc.
- vi. Develop an exit strategy for livelihood interventions and discourage people from being over-dependent on external assistance.
- vii. Indicate risks that may arise in implementing mid-term livelihood recovery interventions and how these risks could be addressed.
- viii. Monitor the benefits and impact of the livelihoods intervention and document the process.
- ix. Employ affected people in debris removal, which can serve as a long-term catalyst for business opportunities for Micro Small Medium Enterprises (MSMEs), particularly in the recycling industry.
- x. Use cash for work programmes for short-term emergency employment programmes such as to restore small and medium enterprises (SMEs), critical infrastructure and other public works. This can generate rapid employment, increase purchasing power and enable beneficiaries to meet their basic needs.
- xi. Use cash / food for work schemes to engage the affected groups (poor, unemployed) in early recovery debris clearance or other infrastructure activities.
- xii. Provide commodity vouchers for disaster-affected populations which can be exchanged for a fixed quantity of named commodities from certified traders either at distribution outlets, markets or special relief shops.
- xiii. Provide cash vouchers with fixed cash value that can be exchanged for a range of items from special shops or traders.
- xiv. Provide small grants and short-cycle skills training to assist vulnerable groups and ensure that they benefit from these emergency employment opportunities.
- xv. Monetize and subsidize sales of local products such as food grain, equipment etc. through specific outlets, to promote local production units and businesses.

- xvi. Maximize local procurement to promote use of locally available labour, materials and services, to assist in the recovery of the local economy.
- xvii. Create alternative employment opportunities with assistance from the private sector and civil body organizations, particularly for communities at high-risk of exploitation or trafficking.
- xviii. Carry out detailed damage, needs and capacity assessment to inform the mid-and long-term recovery interventions.

(ii) Medium and Long term Recovery

Despite provision of support and assistance in early recovery, assets may not be immediately available, and continued livelihood provisioning may be necessary to prevent asset depletion. Moreover even when productive assets have been re-established, considerable time may pass before they can be used to generate income (e.g. farmers who must await harvest to sell crops, or weavers must endure a lack of market demand for woven cloth). Therefore, continuous recovery assistance is required during mid-term recovery. These activities include:

- (a) Secondary Sector (Business & Industry: Micro, Small and Medium Enterprises)
 - i. Provide technical and financial support to resume business and increase competitiveness.
 - ii. Stimulate local level employment and production through labour-intensive infrastructure projects that can give opportunities to local and small contractors.
 - iii. Provide short-term training for small and micro-enterprises and business development for vulnerable groups.
 - iv. Promote traditional and existing skills, particularly those contributing to sustainable livelihoods and reconstruction.
 - v. Provide opportunity for diversification of occupations to the affected population.
 - vi. Facilitate Income Generating Activities (IGAs) through provision of training, resources or/and assets to undertake new occupations or re-establish disrupted occupation.
 - vii. Train affected communities in relevant skills that can contribute to their livelihood restoration.
 - viii. Ensure clearance of access roads and linkages to facilitate transportation of goods and produce.
 - ix. Facilitate the formation of groups to source funding for similar livelihood activities.
 - x. Provide grants for repairing/buying equipment and raw materials to kick-start business, particularly for the most marginalised and vulnerable groups.
 - xi. Facilitate the provision of soft loans to buy equipment and raw materials.
 - xii. Facilitate support from micro-finance institutions to rehabilitate SMEs, buy equipment and raw materials.
 - xiii. Sensitise communities about risk insurances and their benefits, particularly in hazard-prone areas.
 - xiv. Provide short-cycle business-management training for SMEs recovery.
 - xv. Establish a coordinated and efficient supply chain management (SCM) using local capacity and involving local vendors and markets in the process.
 - xvi. Provide cash support for livelihood recovery giving people options for investment and to rebuild previous livelihoods or establish new ones.
 - xvii. Invest in critical infrastructure such as schools, hospitals, water supply, sanitation etc. to ensure support to affected populations.
 - xviii. Provide microfinance credit, savings and insurance to poor households, who are excluded from the formal banking sector. Microfinance institutions (MFIs) can additionally provide post-disaster communication and coordination through their established community networks.
 - xix. Conduct evaluations of programmes and allocate funding and staff for M&E.
 - xx. Strengthen local institutions for improved implementation of livelihoods programmes.
- (b) Tertiary Sector (Trade, tourism and service sector)
 - i. Support and continue marketing and promotional activities through the entire recovery period.
 - ii. Supplement advertising campaigns by Public Relations activity such as road shows etc. as a part of initial promotional activity.

- iii. Where appropriate, use of celebrity endorsed factual messages may be considered to communicate community advances in post disaster recovery campaigns and the stability and recovery of the destination.
- iv. Provide technical and financial assistance for business resumption and increased competitiveness.
- v. Conduct training programmes to help affected communities find new jobs or update their skills while their former jobs become available again.

(c) Informal Sector and Women Income Earners

Revival of the informal sector is very important for the local market and the service providers to recover quickly and in an organised manner. This is also the case for women's work, which is often socially invisible even though in most households it is their unpaid and paid work that is at the heart of household wellbeing. Economic rehabilitation and reconstruction must target economically weaker sections and active women of all ages and social groups in the following manner-

- i. Implement economic initiatives that include tasks in which women are involved and likely to have sustained disaster losses, particularly those whose work is dependent on natural resources.
- ii. Prioritise restoration of economic resources that will contribute to women's livelihood recovery.
- iii. Provide grants and soft loans to self-employed artisans and home-based workers to replace tools and resources that have been damaged.
- iv. Assist in expansion of women's employment opportunities by providing alternative livelihood skill based training programmes.
- v. Evaluate women's ability to participate in and benefit from economic recovery packages.
- vi. Generate short term economic opportunities.

Guidelines for Livelihood Recovery

- A detailed livelihood-based approach should form the basis of planning for interventions.
- Livelihood interventions need to be quick to be effective. A delay could result in migration /adopting other coping mechanisms, which could have adverse consequences in the future.
- Consultations with the community in design, implementation and monitoring of the livelihoods programme helps to enhance its targeting, impact and planning an exit strategy.
- Gender considerations must be in the forefront. Ensuring women's participation in the livelihoods programme significantly enhances its overall impact.
- Livelihood interventions should reduce future disaster risks and contribute to structural defences against hazards.
- Food security, malnutrition, health status and special needs of communities need to be considered while planning interventions.
- Livelihoods programme should promote skills, enterprise and asset building to ensure sustainability of interventions.
- Strong monitoring mechanisms must be enforced for accountability.
- Indicators to evaluate effectiveness of livelihood programmes must be identified carefully to reflect the objectives of the programme.
- Programmes must be based on a realistic understanding of the socioeconomic post-disaster environment, derived from assessments, including pre-programme and labour market assessments.
- Interventions must be locally suited/adapted/needs based and developed in partnership with local institutions.
- Livelihoods recovery must incorporate climate change adaption strategies to enhance the value, resilience and life of investments.

Implementation Mechanism	
Institutions	SDMA, NDMA, MHA, Ministry of Poverty Alleviation, other line ministries, PRIs, local authorities
Partners	UN Agencies, CSOs and CBOs
Funding	SDRF; NDRF; Budgetary allocations; micro-credits (local banks); beneficiaries' savings; individual donations; government schemes for employment; International assistance
Modality	Cash-for-Work, Food-for-Work, soft loans, MFIs, Commodity and Cash Vouchers

(b) Agriculture and Animal Husbandry

India is predominantly an agrarian economy where agricultural activities are seasonal. As a result, recovery in the agricultural sector in the aftermath of a large-scale disaster requires inputs in a timely manner. Farmers lose their crops, and they have no surpluses or savings to invest in the next round of sowing. Additionally, depending on the nature and type of disaster, soil conditions may change or even land may be lost. In order to successfully assist in recovery, a detailed damage and needs assessment must precede recovery interventions.

(i) Early Recovery

Key early recovery interventions in agriculture, animal husbandry and fisheries are as follows:

(a) Agriculture

- i. Procure and distribute agricultural inputs, such as capital, seeds and fertilizers, among farmers to ensure that they can resume their agricultural operations at the earliest.
- ii. Procure and distribute agriculture tools that have a simple design, easy to use and can be locally repairable to avoid delays due to equipment failure.
- iii. Ensure clearance of access networks to avoid transportation delays in providing assistance.
- iv. Clear debris from farmland to prepare it for tilling and sowing.
- v. Promote small-scale irrigation projects to support small plots of vegetable crops through the reconstruction of irrigation canals and provision of pipes, particularly in non-rain fed areas.
- vi. Provide technical assistance in calculating water demand for crops and rehabilitating primary irrigation canals.
- vii. Distribute pumps or provide vouchers and fuel that can assist farmers in renting pumps for irrigation.
- viii. Use cash-for-work programmes to excavate and rehabilitate secondary and tertiary canal systems.
- ix. Establish home-based horticulture nurseries for women through providing training, inputs and financial assistance.
- x. Provide assistance for damage and needs assessment.
- xi. Introduce agricultural coping strategies such as a place for growing crops that can be protected from flooding.

(b) Livestock

- i. Provide assistance for livestock losses to help farmers in replacing them and resuming their farm-related activities.
- ii. To prevent loss of livestock through distress sale or deaths, ensure provision of water, fodder, deworming, medication and veterinary care by setting up cattle camps and fodder depots.
- iii. Strengthen pest-management systems to avoid threats.
- iv. Ensure de-stocking when animals are at increased risk of dying.

(c) Fisheries

- i. Distribute fishing tools (fishing nets, boats and cages) to improve the catch.
- ii. In shrimp farms, provide inputs of lime, fertilizer and feed.
- iii. Repair damaged infrastructure including boats, gear and means of communication.
- iv. Restore livelihoods of women in trading, drying and processing fish.

(ii) Medium to Long term Recovery

Critical mid-term recovery interventions in the agrarian and related sectors are as follows:

- i. Introduce alternative crop planning and prioritize better management practices.
- ii. Procure quality farm inputs and provide grant aids for seeds and fertilisers.
- iii. Restore and prepare degraded land. The Government may support farmers through tractor subsidies or provision of draft animal.
- iv. Promote marketing and selling of farm produce from affected regions.
- v. Provide micro-credit grants for the purchase of agricultural inputs through farmer clubs, SHGs etc.
- vi. Provide soft loans to farmers to purchase farm equipment, draft animals etc.
- vii. Train farmers in the production and use of organic fertilisers that may promote a more sustainable means of improving soil fertility in the long-term. This is important for areas where fertilizers are prohibitively expensive or unavailable or where farmer indebtedness is a problem.
- viii. Provide training to build institutional capacity in water management to manage common water resources at the community level.
- ix. Reconstruct damaged irrigation canals and provide pipes. Technical assistance and constant supervision is required in the reconstruction and repair of primary, secondary and tertiary canals.
- x. Use Food or Cash-for-work in excavation, repair and reconstruction of agricultural infrastructure.
- xi. Promote methods for drying/preserving seed stocks and encourage the formation of seed banks to facilitate farming after future disasters.
- xii. Promote flood-resistant crop varieties and cultivation practices to strengthen resilience.
- xiii. Introduce seed varieties that can mitigate land salinity.
- xiv. Construct disaster-resistant seed and food storage capacity.
- xv. Promote small-scale seed multiplication to build production capacity for the subsequent irrigation cycles.
- xvi. Promote irrigation practices (water harvesting and conservation) that enable crops to cope with erratic rainfall.
- xvii. Encourage crop diversification in hazard-affected communities to include climate resilient crops that can withstand climatic stresses or recurring natural hazards (high winds, flooding).
- xviii. Rehabilitate river embankments as a preparedness measure towards flooding.
- xix. Support marginalised farmers with interest-free agricultural loans.
- xx. Sensitise farmers to effectively use the governments' Livestock Insurance Scheme.

Guidelines for Recovery in Agriculture, Animal Husbandry and Fisheries

- A detailed assessment using the livelihood-based approach should form the basis of the planning for this intervention.
- A food security-centered approach should be adopted that combines initial food aid and supports agricultural production over time until conditions and production normalise.
- Since women play an important role in agricultural activities, appropriate gender considerations must be reflected in beneficiaries' selection to minimize their exclusion.
- Seed distribution should never be used to test a new variety of seed.
- In the initial stages, farmers must be provided with seed varieties that are familiar to them. If available, local seed varieties should be prioritised.
- Provision of agricultural inputs in a timely manner is critical.
- Tool selection should depend on its simplicity, function, power/energy requirement, cost (initial, operational and maintenance), durability, service requirements and cultural aspects. Initial tools should generally be limited to the conventional tools used in the local area.
- Labor intensive activities must utilise cash-for-work transfers targeting vulnerable people.
- Community participation (vulnerable groups) must be at the centre of recovery activities.
- Recovery must consider impact of climate change on the traditional livelihoods in the area.
- Recovery options must incorporate climate change adaption strategies to enhance the value, resilience and life of investments.

Implementation Mechanism	
Institutions	SDMA, Department / Ministry of Agriculture, other line ministries, PRIs, local authorities
Partners	IFAD, WFP, World Bank, UN Agencies, Consultative Group on International Agricultural Research Centers, and other international, national and local NGOs working on agricultural related sectors. State Farms Corporation of India, National Seeds Corporation Limited, Central Institute of Coastal Engineering For Fishery, Bangalore; Central Institute of Fisheries Nautical and Engineering Training, Cochin. Universities, extension services, cooperatives, CSOs and CBOs.
Funding	SDRF, NDRF, IFIs, UN Agencies; Budgetary allocations; micro-credits through local banks; beneficiaries' own savings; individual donations; government schemes for animal husbandry, dairy development and fisheries.
Modality	Cash-for-Work, Food-for-Work, soft loans, interest-free agricultural loans, grants for agricultural inputs.

8.3. Social components of Recovery

(a) Health

The fundamental recovery objective of the health sector is to restore and improve health services to promote resilience, health and wellbeing of the entire community. This implies that the health system will have safer infrastructure, be prepared for key public health hazards and future disasters, and provide equitable and affordable services to all.

(i) Early Recovery

Health care and public health programmes that reduce vulnerabilities and save lives are essential services required after any disaster. Early recovery interventions focus mostly on service delivery to cater to immediate health risks.

- i. Make primary basic health services easily accessible at the temporary resettlement sites while secondary specialised health care services can be provided at other appropriate sites.
- ii. Ensure that poor and vulnerable groups have access to free health care.
- iii. Review health network and rationalize numbers, types and distribution of health facilities.
- iv. Strengthen coping capacity of health facilities that are projected to receive significant numbers of affected populations.
- v. Activate temporary depots for decentralized provisioning of immediate medical supplies.
- vi. Re-establish routine vaccination, de-worming campaigns and nutritional programmes.
- vii. Monitor the development and growth for children in affected areas.
- viii. Scale up the routine Integrated Child Development Services (ICDS) and Reproductive and Child Health (RCH) projects and programmes that should include strengthening health care within communities.
- ix. Re-establish blood banks.
- x. Provide technical and financial support to management of health facilities.
- xi. Repair and restore damaged health care facilities.
- xii. Replace damaged medical equipment, furniture and provide necessary medical supplies.
- xiii. Integrate medical interventions, including antenatal care (ANC), PMTCT, nutrition and immunization.
- xiv. Revitalize existing health systems and also redesign key services according to changed conditions, e.g. disabilities and psychosocial support.
- xv. Establish planning and designing for health infrastructure.
- xvi. Restore or establish a comprehensive TB, Malaria, Hepatitis B and HIV control programme.
- xvii. Ensure continuous provision of fuel and gas for boiling water to make food and water consumption safe.
- xviii. Provide protective gear to clean-up workers to minimize exposure to particulate and hazardous building materials.
- xix. Strengthen national and local health surveillance systems and early warning alert mechanisms to ensure swift action against communicable diseases, common childhood illnesses, malnutrition, conditions related to childbirth and damage to mental health.

- xx. Ensure availability of basic preventative and curative care, including access to good quality essential drugs and vaccines, surgical supplies and health information, to all those affected, particularly the vulnerable such as babies, children, elderly, pregnant women, the differently abled and the chronically ill.

(ii) Medium to Long term Recovery

Key interventions for mid-term recovery in health care are as follows –

- i. Conduct risk assessments (hazard, vulnerability and capacity) to inform long term action.
- ii. Plan for measures to strengthen health emergency and disaster risk management capacities.
- iii. Based on findings and analysis of the assessment, establish new hospitals, health centres and public health institutions.
- iv. Train the healthcare staff on emergency procedures and how to function efficiently in disaster situations.
- v. Invest in training para-medical staff, particularly in primary and secondary healthcare centres and also for pre-hospital emergency medical care.
- vi. Include private health providers in emergency response planning and disaster training, particularly in high-risk areas.
- vii. Ensure a safe disposal system for hospital waste.
- viii. Spread awareness about the importance of clean and hygienic living environment.
- ix. Health centres must have an operations plan for hazards (including provision for essential medicines, developing strategies for rapid response, building up a pool of experienced national/regional/local healthcare staff resilient to emergencies).
- x. Strengthen primary health care services, including planning service delivery restoration and expansion to underserved areas.
- xi. Incorporate disaster resilient measures and safe hospital building standards (including location) during reconstruction and rehabilitation of medical facilities. These should also be physically accessible to the disabled.
- xii. Ensure that blood safety, sterilization of health facilities, disposal of injections and sharp medical supplies and medical waste disposal, are addressed systematically in all health care facilities.
- xiii. Gradually revitalize discontinued health care services in the affected areas and upgrade them to reflect the current population size.

Guidelines for Recovery in Health Care Facilities

- All community members, including vulnerable groups must have access to priority health interventions based on the principle of equity and non-discrimination.
- Local health authorities and community members must participate in the design and implementation of priority health interventions.
- Coordination and collaboration amongst other sectors in the design and implementation of priority health interventions, including water, sanitation and hygiene, food security and nutrition, shelter and protection must be achieved.
- Medical wastes must be disposed safely.

Implementation Mechanism	
Institutions	SDMA, NDMA / Ministry of Home Affairs, Ministry / Department of Health and Family Welfare, Ministry of Drinking Water and Sanitation, Ministry of Women & Child Development, other line ministries, PRIs, local authorities
Partners	IFIs, UN Agencies, international, national and local NGOs working in the health sector, State and Central hospitals, CSOs and CBOs
Funding	SDRF / NDRF, IFIs, UN Agencies, Budgetary allocations, CSS Schemes such as National Rural Health Mission.
Modality	Equipment, cash and material grants, technical assistance, etc.

(b) Water and Sanitation Facilities

A disaster event can destroy or severely damage existing water and sanitation related infrastructure in both urban and rural areas. Such situations can compel affected communities to use unsafe water sources and have poor sanitation conditions, making them more prone to water-borne illnesses and infectious diseases. Provision of safe drinking water, adequate sanitation services and good hygiene practices is essential to recovery.

(i) Early Recovery

Key steps in early recovery in water and sanitation are as follows:

- i. Provide drinking water continuously for emergency, temporary shelters, schools and health facilities.
- ii. Provide equipment and material for repairing water and sanitation systems, such as water supply and solid waste collection and disposal.
- iii. Carry out repairs, maintenance and upgrading of damaged systems (such as water supply networks, tube-wells ^[1] equipped with hand or motorized pumps) to at least pre-disaster levels.
- iv. Incorporate DRR based improvements in repair and restoration wherever possible.
- v. Clean contaminated open wells by removing debris, chlorinating and protecting the well from possible contaminants.
- vi. Support returning populations through provision of tools such as picks and shovels to clear debris from around their houses, sanitation facilities, communal areas and drainage ditches. This can be incorporated within the emergency employment strategy, discussed above.
- vii. Provide cash or material support for toilet construction or rehabilitation in coordination with shelter recovery strategies.
- viii. In urban areas, provide access to collective sewage networks, solid waste collection and disposal systems. It is important to separate sewer pipes and drainage from drinking water facilities to avoid contamination.
- ix. Promote hygiene education through awareness building, training and provision of essential hygiene kits required to prevent water and sanitation related diseases. Awareness messages on hygiene can be disseminated through schools and CBOs.
- x. Mobilize community involvement in the design and maintenance of these facilities
- xi. Arrange regular water quality testing in affected areas. Drinking water quality must conform to prescribed standards (IS 1050040). Additionally, the quantity of water must conform to the Sphere standards as presented in the table below-

Needs	Amount (litres per day)	Factors affecting water consumption
Survival Needs (Water intake through drinking and food)	2.5 – 3	Depends on the climate and individual physiology
Basic hygiene practices	2 – 6	Depends on social and cultural norms
Basic cooking needs	3 – 6	Depends on the type of food and social and cultural norms
Total basic needs	7.5 – 15	-

Table: Minimum water requirements per person per day

(Source: Sphere Minimum Standards in Water Supply, Sanitation and Hygiene Promotion)

- xii. Ensure women's participation in water supply and sanitation programmes to minimize women and girls' vulnerability to sexual and other forms of gender-based violence in the use of communal water and sanitation facilities.
- xiii. Provide technical assistance in construction of drainage, water supply and spreading hygiene awareness.

(ii) Medium to Long term Recovery

Key interventions in the mid-term recovery of water and sanitation facilities are as follows-

⁴⁰ Details on IS 10500 can be found at: <https://law.resource.org/pub/in/bis/S06/is.10500.2012.pdf>

- i. Carry out repair, maintenance and upgrading of damaged systems to at least pre-disaster levels and improvements must be based on sound risk assessment wherever possible.
- ii. Provide appropriate drainage facilities so that dwelling areas and water distribution points are kept free of standing wastewater and storm water drains are kept clear.
- iii. Use sustainable construction materials and technologies appropriate to the local context.
- iv. Involve affected groups at every stage of the process (planning, decision making).
- v. Create Water and Sanitation (WATSAN) committees consisting of at least 50% women to ensure representation of women's concerns, proper management and to promote sustainability of the facility.
- vi. Promote hygiene education through awareness building and training in communities, universities and schools.

Guidelines for Recovery in Water and Sanitation

- Food security, malnutrition, health status and special needs of communities need to be considered while planning WATSAN interventions.
- Protect toilets and sewers from flooding in order to avoid structural damage and leakage.
- Prevent wastewater from drinking, washing and bathing areas to avoid contamination of water sources.
- Plan, build and maintain water point drainage to ensure that mosquitoes do not breed in areas close to dwellings.
- An equitable participation of women and men in planning, decision-making and local management will help ensure that the entire affected population has safe and easy access to water supply and sanitation services.

Implementation Mechanism	
Institutions	SDMA, Ministry of Drinking Water and Sanitation, Ministry of Health and Family Welfare, other line ministries, PRIs, local authorities
Partners	IFIs, UN Agencies, international, national and local NGOs working in WASH related sectors, CSOs and CBOs
Funding	SDRF, NDRF, IFIs, UN Agencies; Budgetary allocations.
Modality	Equipment, cash and material grants, technical assistance, etc.

(c) Education

Following a disaster event, children in large numbers are excluded from the education system and many do not get an opportunity to return to school. Past experiences have shown that the education sector is among the hardest hit post-disaster. Most schools are constrained with regard to safety measures, i.e. minimum standards and measures to protect students and teachers, learning materials and property from natural or human made disasters. Therefore, increasingly recovery activities in education emphasise a child's right to uninterrupted education, a safe environment and putting in place DRR measures.

(i) Early Recovery

Critical early recovery measures to ensure continuous education for children are as follows:

- i. Replace damaged education materials and minimum equipment required for classes to function.
- ii. Facilitate intensive utilisation of undamaged education facilities by establishing several daily shifts instead of the normal schedule.
- iii. Set-up temporary classrooms using locally and readily available building materials.
- iv. In case of large scale disasters with a heavy toll on human lives, conduct schemes to fast-track teachers' training.
- v. Facilitate provision of additional teachers and administrative support.
- vi. Create safe learning and teaching spaces.
- vii. Facilitate special teaching provisions (such as temporary schools) for injured and differently abled children.
- viii. Provide psychosocial support for the students and teachers to deal with post disaster traumas.
- ix. Actively engage children in schools to prevent school drop-outs and to prevent child labour.

(ii) Medium to Long term Recovery

- i. Carry out repairs, maintenance and upgrading of damaged schools based on risk assessments to at least pre-disaster levels.
- ii. Retrofit existing undamaged schools to incorporate safes building standards, particularly in hazard-prone areas.
- iii. Provide support to rebuild damaged infrastructure at all levels (schools, colleges, and technical institutes) through grants, soft loans and/or through Public Private Partnerships (PPP).
- iv. Facilitate capacity building programmes on safe school design and construction targeted at academia, professional associations, line departments and licensing bodies; and ensure that architects, engineers and builders correctly apply appropriate codes and construction techniques.
- v. Ensure incorporation of Sendai Framework for Disaster Risk Reduction guidelines of safe school construction standards.
- vi. Ensure provision of water supply and sanitation facilities in schools/colleges/institutes, keeping in mind the needs and privacy of girls/women.
- vii. Relocate schools in highly-hazard prone areas to safer sites.
- viii. Conduct risk assessments (hazard, vulnerability and capacity) to inform long-term action.
- ix. Provide financial assistance/grant aid to reconstruct and rehabilitate public schools.
- x. Provide soft-term credit, where appropriate, for reconstruction of damaged private schools.
- xi. Regularly visit children's homes to bring back the drop outs and provide additional coaching to affected students.
- xii. Reschedule school calendars and examination dates.
- xiii. Identify, assess and monitor disaster risk in the education sector on a continual basis.
- xiv. Incorporate DRR in the education sector (through trainings, curriculum upgrades etc.) to build a culture of safety.
- xv. Impart trainings and mock drills to school children, teachers, university students etc., in emergency evacuation, first aid and handling fire safety equipment.
- xvi. Build the capacity of affected people through community-based education in emergencies and DRR.

Guidelines for Recovery in Education

- The specifications of school reconstruction should comply with the National Building Code (2005) and State and local building codes.
- Key and relevant partners, who have a stake in the education sector and can provide a positive synergy to recovery in education, should be involved.
- New school buildings constructed must be multi-hazard resistant and comply with structural specifications and standards.

Implementation Mechanism	
Institutions	NDMA, SDMA, Ministry of Education, Ministry of Home Affairs, District Education Committee, Ministry of Drinking Water and Sanitation, line ministries, local authorities
Partners	International, national and local NGOs working in the education and disaster management sector, UN agencies, IFIs, Civil society and community-based organizations, architecture and civil engineering colleges.
Funding	SDRF, NDRF, IFIs, Budgetary allocations, UN Agencies; CSS such as National School Safety Programme (NSSP).
Modality	Equipment, financial assistance, cash and material grants, technical assistance, PPP etc.

(d) Psycho-Social Support

In addition to logistical and material support, the disaster-affected communities require Psycho-Social Support (PSS)⁴¹ to address various psychosocial and mental health problems arising in the aftermath of disasters. Comprehensive PSS can help individuals, families and groups to build human capacities, restore social cohesion and infrastructure along with maintaining their independence, dignity and cultural integrity⁴². PSS helps in reducing actual and perceived stress levels and preventing adverse psychological and social consequences amongst disaster-affected communities.

(i) Early Recovery

- i. Form support groups for different sections of the community (widows/widowers, youth, children, elderly).
- ii. Distribute psychosocial support relief items (such as recreational material).
- iii. Create safe spaces for children equipped with play-kits, storybooks and toys/games.
- iv. Use art and play therapy with children.
- v. Provide trauma and grief counselling by creating safe opportunities for people to focus their thoughts, talk about them and express associated feelings (e.g. loss of loved ones).
- vi. Assist in tracing community and family members and support reunification to restore a sense of normality in their lives.
- vii. Advocate a quick restoration of basic physical needs to promote psychosocial well-being.
- viii. Organise collective community actions such as clean-up activities, religious ceremonies, community kitchens, etc.
- ix. Provide consultation and technical assistance to local mental health agencies in the development and implementation of crisis counselling service programs for disaster victims.
- x. Mobilize, train and use local volunteers to implement psychosocial programs and support community members to seek counselling by removing associated stigmas.
- xi. Identify internal community resources and knowledge, and individual skills and talents.

(ii) Medium to Long term Recovery

- i. Conduct an assessment of the affected community to identify the level of trauma for each community member where possible.
- ii. Organise professional as well as individual, family or group interventions as part of counselling for people affected directly or indirectly by the disaster.
- iii. Undertake awareness programmes highlighting key messages that are relevant for the positive well-being of the target group.
- iv. Monitor the situation of the affected community through regular community and home visits.
- v. Organise PSS programmes for service providers and volunteers to reduce their stress of working in a post disaster situation with affected communities. Some of them may have also suffered personal losses in the disaster (e.g. local volunteers).
- vi. Support children to return to school as it restores predictability of daily routine and reconnects children to peer networks.
- vii. Support teachers and non-family caregivers (as they too might have faced losses) so that they can play an effective role in forging normalcy in the community.
- viii. Facilitate training and counselling to provide life and livelihood transitions.
- ix. Open local PSS/mental health centres to assist through the entire recovery period.
- x. Conduct activities that will prevent elders from the community living in isolation.
- xi. Develop activities in which community members cooperate with one another and support the community.
- xii. Mobilize youth volunteers to help provide psychosocial support to vulnerable groups, particularly children.
- xiii. Provide professional support to the affected population/individuals, who require referral and care for severe psychological disorders.
- xiv. Create a core group of master trainers to impart training to volunteers and emergency workers.

⁴¹ According to IFRC, PSS is a process of facilitating resilience that helps individuals, families and communities bounce back from the impact of crises and deal with such events in the future. It focuses on helping individuals overcome issues associated with a disaster, and works to prevent these issues from becoming long-term problems. (Stephanie Murphy, Canada Red Cross 2016, <https://www.redcross.ca/blog/2016/8/psychosocial-support-building-resilience-after-trauma>)

⁴² NDMA 2009

Guidelines for Psycho-Social Support Recovery

- Ensure that community assessments cover all groups, including the most vulnerable (women, children, elderly and the differently abled).
- PSS should pay special attention to women, children, nursing and pregnant women, elderly, differently abled and displaced persons.
- Include trained community volunteers in psychosocial support.
- While assistance is critical in PSS, the communities should be supported in the mid-term to make them independent of external support in the long-term.

Implementation Mechanism

Institutions	NDMA, SDMA, Ministry of Health and Family Welfare, Ministry of Women & Child Development, line ministries, PRIs, local authorities
Partners	International, national and local NGOs, Aanganwadi workers, spiritual organisations, State and Central mental health hospitals, General Hospital Psychiatric UNIT (GHPU), NIMHANS, IHBAS, MIMH, civil society and community-based organizations,
Funding	NDRF, SDRF, IFIs, UN Agencies; Budgetary allocations, CRF/NCCF, NDRF, CSS and programmes such as National Mental Health Programme, National Rural Health Mission
Modality	Support materials, technical assistance, volunteers etc.

8.4. Cross Cutting Issues in Recovery and Reconstruction

Cross-cutting issues such as DRR, environment, gender, and governance are essential to the success and sustainability of recovery interventions as they cut across sectors affected by disasters and ensure a more holistic approach to recovery for communities. Using the BBB approach these can be implemented as follows:

(a) Disaster Risk Reduction (DRR)

The recovery period should be considered as an opportunity, particularly for policy and decision makers to implement various actions that can mitigate long term economic, physical and social risks facing a community.

- i. Land use planning as a means to achieve a more sustainable recovery. Identification of potential risk sites can lead to reformulation of policies to ensure that future development does not take place in high-risk areas.
- ii. Existing zoning regulations modified to consider the future impacts of climate change, e.g. from rising sea levels.
- iii. Infrastructure such as hospitals, transport/communications and schools incorporate disaster resilient features, by mainstreaming DRR in construction such as through revised building codes and practices (hazard-proof building codes, water-harvesting structures etc.).
 - a. Replacing damaged assets with context, sensitive, technologically updated alternatives. For example, modernizing damaged telecommunications equipment to keep up with technological advances.
 - b. Using recovery as an opportunity to right-size infrastructure to better meet community needs. For example, reconstructing hospitals with an adequate number of beds.
- iv. Increasing a community's ability to cope with the effects of disaster (community based risk reduction), e.g. emergency plans, insurance, modification of land use and agricultural practices.
- v. Mainstreaming DRR in sustainable livelihood development, particularly in disaster prone areas. By addressing local vulnerabilities and concerns, and building capacities related to DRR, these initiatives can provide practical, effective and contextually relevant ways to decrease vulnerability and also facilitate adaptation to climate change.
- vi. Promoting resilient agriculture and livestock. For example, farming livestock that are naturally more resilient to withstand the effects of a flood.
- vii. Introducing business continuity systems for employment and livelihoods, enabling large businesses as well as small and medium enterprises to quickly resume operations after a crisis.

- viii. Promoting the use of materials and technology in manufacturing processes that are easily repaired after damage from disasters.
- ix. Building financing mechanisms that fast disburse affordable, low-interest financing to businesses affected by the disasters.
- x. Additionally, as a part of long-term recovery actions, early warning systems and preparedness planning must be strengthened based on the lessons drawn from the disaster.

(b) Environmental Conservation and Protection

Post-disaster recovery interventions without proper environmental safeguards and guidance can have short- and long-term damaging environmental impacts. Recovery activities can involve severe exploitation of limited on-site natural resources and in non-affected areas. Such practices can be environmentally unsustainable. Therefore, recovery activities should consider ways in which environmental vulnerabilities can be addressed. These can include:

- i. Identifying environmental impacts and risks caused by the disaster, relief operations and coping mechanisms and evaluating potential environmental pressures from forthcoming recovery activities.
- ii. Identifying ways in which environmental degradation may have contributed to the underlying causes of the disaster and how environmental vulnerabilities can be addressed during recovery.
- iii. Assessing institutional capacities at the national and local levels to mitigate environmental risks and manage environmental recovery.
- iv. Identifying opportunities that support sustainable livelihoods, use environmentally sound construction materials and technologies and use alternative energy options.
- v. Promote climate change adapted livelihood strategies.
- vi. Integrating environmental needs within early recovery programming and across the relevant recovery sectors following the principles of BBB.
- vii. Rebuilding/restoring physical and environmental infrastructure to reduce vulnerability, protect the environment, and restore natural ecosystems. For example, using mangroves as natural protection against sea intrusion.
- viii. Integrating sustainable environmental practices and natural resource management within recovery activities. For instance, promoting forestry and/or agro-forestry initiatives like fruit or commercial tree farming as alternative sources of income.
- ix. Providing an understanding of specific vulnerabilities that women and other groups in the communities may face, and identify their capacities and needs to engage in the process of environmental recovery.
- x. Putting monitoring and evaluation mechanisms in place to track environmental impact during implementation of recovery interventions.

(c) Protection of Vulnerable Groups (Gender, displaced, differently abled, children)

Specific groups are often more vulnerable and need special assistance in the aftermath of a disaster. These groups almost always include women, children, people with disabilities and the elderly. Other vulnerable groups may include: persons experiencing severe social stigma (e.g. Dalit populations), impoverished populations, persons with HIV/AIDS, indigenous groups, ethnic minorities, renters, squatters and the landless, geographically isolated communities. These groups are more vulnerable than other since:

- i. They are less able to protect themselves during a disaster and its immediate aftermath.
- ii. They have existing vulnerabilities that are exacerbated in situations of disaster, leaving them at greater risk of exclusion, exploitation and abuse.
- iii. They are less likely to be consulted or participate in recovery planning and mobilization and their needs are often overlooked.

Therefore, protection of vulnerable groups must be addressed in recovery efforts that should include:

- i. Assisting grassroots women leaders become trainers and scale up women's participation in disaster recovery.
- ii. Identifying and strengthening existing institutions (the Mahila Mandals) to facilitate recovery from within communities.
- iii. Providing the opportunity and the technical and financial support to carry out recovery activities.

- iv. Recognizing the expertise within these groups and empowering them to improve and expand their role in managing community resource needs.
- v. Developing and strengthening their capacities for more effective future hazard mitigation and for increased coping capacity in the event of disaster.
- vi. Targeting financial institutions for sensitivity towards gender issues and vulnerable populations for better understanding their economic constraints and addressing their needs in disasters.
- vii. Ensuring protection, monitoring and reporting, with particular focus on the access to recovery assistance by these groups.
- viii. Assessing and reinforcing community-based protection monitoring capacity to identify gaps/needs for further support.
- ix. Reviewing and updating disaster management plans, taking into consideration lessons learned from protection response.
- x. Ensuring the participation of women, children, and marginalized groups in planning and managing durable solutions.

(d) Governance

Governance has an overarching impact on all aspects of society and economy and therefore has a central role to play in a disaster situation. Disaster Risk Governance involves many actors, but the State, as the sovereignty holder, retains control on these issues as it has the capacity to engage legal, administrative and economic reforms to involve all stakeholders in the decision-making process and assign them the powers and means necessary for their missions. Such governance enhances resilience, takes into consideration the underlying and future risks, and enables an integrated management of disaster risk by ensuring consistency in the following manner:

- i. Introducing business continuity for government systems and public services.
- ii. Preparing contingency response mechanisms.
- iii. Mainstreaming disaster risk management across all sectors.

It is therefore essential to distinguish key interventions of recovery based on their relevance in the early, mid-term and long term phases of recovery. It is also imperative to employ a BBB approach to recovery interventions for future resilience to risks posed by hazards. Finally to ensure a holistic and integrated recovery process it is necessary to focus on cross-cutting issues that affect various aspects of the lives of the affected communities.

Annexures

Annexure I. Acronyms

ADB	Asian Development Bank
ANC	Antenatal Care
BBB	Build Back Better
CBO	Community Based Organizations
CII	Confederation of Indian Industries
CSO	Civil Society Organizations
CSR	Corporate Social Responsibility
CSS	Centrally Sponsored Scheme
DDMA	District Disaster Management Authority
DM	Disaster Management
DRM	Disaster Risk Management
DRR	Disaster Risk Reduction
DSS	Decision Support System
EWS	Early Warning System
FC	Finance Commission
FICCI	Federation of Indian Chambers of Commerce and Industries
GFDRR	Global Facility for Disaster Reduction and Recovery
GIS	Geographic Information System
GoI	Government of India
HLC	High Level Committee
HMIS	Health Management Information System
IAY	Indira Awas Yojana
ICDS	Integrated Child Development Services
IDSP	Integrated Disease Surveillance Project
IFAD	International Fund for Agricultural Development
IFI	International Financial Institution
IFRC	International Federation of the Red Cross and Red Crescent Societies
IGA	Income Generating Activity
INGO	International Non-Governmental Organizations
LLRD	Linking Relief, Rehabilitation and Development
MFI	Micro-finance Institutions
MGNREGS	Mahatma Gandhi National Rural Employment Guarantee Scheme
MIS	Management Information System
MoUD	Ministry of Urban Development

MSME	Micro Small Medium Enterprise
M&E	Monitoring and Evaluation
NCRRP	National Cyclone Risk Reduction Project
NCRMP	National Cyclone Risk Mitigation Project
NDMA	National Disaster Management Authority
NDMF	National Disaster Mitigation Fund
NDRF	National Disaster Response Fund
NDRMF	National Disaster Risk Management Fund
NIDM	National Institute of Disaster Management
NGO	Non Governmental Organization
NRHM	National Rural Health Mission
PMCARES	Prime Minister's Citizen Assistance and Relief in Emergency Situations Fund
PMNRF	Prime Minister's National Relief Fund
PMTCT	Prevention of Mother-to-Child Transmission
PPP	Public Private Partnership
PSS	Psycho-Social Support
RCH	Reproductive and Child Health
SCM	Supply Chain Management
SDGs	Sustainable Development Goals
SDMA	State Disaster Management Authority
SDMF	State Disaster Mitigation Fund
SDRF	State Disaster Response Funds
SDRMF	State Disaster Risk Management Fund
SHG	Self Help Groups
SIDM	State Institute of Disaster Management
SME	Small and Medium Enterprise
SSA	Sarva Shiksha Abhiyan
UNDP	United Nations Development Programme
UNDRR	United Nations Office of Disaster Risk Reduction
USAID	United States Agency for International Development
UTs	Union Territories
WATSAN	Water and Sanitation
WB	World Bank
WFP	World Food Programme
XV-FC	Fifteenth Finance Commission

Annexure II. Terminology

UNDRR Terminology on Disaster Risk Reduction

Capacity	The combination of all the strengths, attributes and resources available within an organization, community or society to manage and reduce disaster risks and strengthen resilience.
Disaster Management (DM)	The organization, planning and application of measures preparing for, responding to and recovering from disasters. Disaster management focuses on creating and implementing preparedness and other plans to decrease the impact of disasters and “build back better”.
Disaster Risk Reduction (DRR)	Disaster risk reduction is aimed at preventing new and reducing existing disaster risk and managing residual risk, all of which contribute to strengthening resilience and therefore to the achievement of sustainable development.
Disaster Risk Management (DRM)	Disaster risk management is the application of disaster risk reduction policies and strategies to prevent new disaster risk, reduce existing disaster risk and manage residual risk, contributing to the strengthening of resilience and reduction of disaster losses.
Mitigation	The lessening or minimizing of the adverse impacts of a hazardous event.
Preparedness	The knowledge and capacities developed by governments, response and recovery organizations, communities and individuals to effectively anticipate, respond to and recover from the impacts of likely, imminent or current disasters.
Recovery	The restoring or improving of livelihoods and health, as well as economic, physical, social, cultural and environmental assets, systems and activities, of a disaster-affected community or society, aligning with the principles of sustainable development and “build back better”, to avoid or reduce future disaster risk.
Response	Actions taken directly before, during or immediately after a disaster in order to save lives, reduce health impacts, ensure public safety and meet the basic subsistence needs of the people affected.
Resilience	The ability of a system, community or society exposed to hazards to resist, absorb, accommodate, adapt to, transform and recover from the effects of a hazard in a timely and efficient manner, including through the preservation and restoration of its essential basic structures and functions through risk management.
Rehabilitation	The restoration of basic services and facilities for the functioning of a community or a society affected by a disaster.
Reconstruction	The medium- and long-term rebuilding and sustainable restoration of resilient critical infrastructures, services, housing, facilities and livelihoods required for the full functioning of a community or a society affected by a disaster, aligning with the principles of sustainable development and “build back better”, to avoid or reduce future disaster risk.
Vulnerability	The conditions determined by physical, social, economic and environmental factors or processes, which increase the susceptibility of an individual, a community, assets or systems to the impacts of hazards.

Annexure III. Items and Norms of Recovery Assistance

Components of Recovery / Reconstruction	As per the Norms of Assistance in the NDRF / SDRF Guidelines	As per the entitlement of Government Schemes	As per the Scheme of Assistance in the World Bank and State Government Recovery & Reconstruction Projects	Recommendations
Housing				
a) Fully damaged/ Severely damaged / destroyed houses	Rs. 95,100/- per house, in plain areas. Rs. 1,01,900/- per house, in hilly areas	Prime Minister's Awas Yojana a. Rs. 1.20 Lakh (Plain Areas). b. Rs. 1.30 Lakh (Hilly Areas). In urban areas, the support is just for interest subsidy on housing loans for different income-brackets.	Rs. 60,000 in Koshi Flood Recovery Rs. 500,000 in Uttarakhand flood Recovery Rs. 270,000 in Odisha Rs. 400,000 in Kerala Rs. 283,500 (suggested in Maharashtra after 2018 floods) for Pucca houses Rs. 175,500 (suggested in	Rs. 1.50,000 per house for plain areas Rs. 175,000 per house for hilly areas. All the houses need to be owner-driven or its responsibility be taken by a housing agency, NGO, etc. It would be difficult to construct a house within this cost structure through a contractor-driven modality.

			Maharashtra after 2018 floods) for Kutcha houses	
b) Partially Damaged Pucca House (other than huts) where the damage is at least 15 percent.	Rs. 5,200/- per house		Rs. 10,000 (Kerala floods) Rs. 42525 (15% of replacement cost) (suggested in Maharashtra after 2018 floods)	Rs. 25,000 per house. The objective of such an assistance is that that after the repairs, the house has a minimum level of functionality.
c) Partially damages Kutch Kutcha House (other than huts) where damage is at least 15 percent.	Rs. 3,200/- per house		Rs. 43875 (25% of replacement cost) (suggested in Maharashtra after 2018 floods)	Rs. 15,000 One view could be that the distinction between Pucca and Kutcha houses be removed, and the assistance for repairs and reconstruction be identical for both the categories.
Damage: 16-29 percent (Plains/ Hills)	28,500 / 30,500		Rs. 60,000 (Kerala floods)	Rs. 75,000 (Pucca houses) Rs. 50,000 (Kutcha houses)
Damage: 30-59 percent	47,500 / 51,000		Rs. 125,000 (Kerala floods)	Please see the views expressed above.
Damage: 60-74 percent	71,000 / 76,500		Rs. 250,000 (Kerala floods)	

d) Damaged / destroyed huts	Rs. 4,100/- per hut, (Hut means temporary, make shift unit, inferior to Kutcha house, made of thatch, mud, plastic sheets etc. traditionally recognized as hut by the State/ District authorities.) Note: -The damaged house should be an authorized construction duly certified by the Competent Authority of the State Government.		Rs. 87, 750 (suggested in Maharashtra after 2018 floods)	Rs. 75,000 for reconstruction of a new house which is more resilient. The approach is not just the replacement of huts, but providing liveable houses which also brings improvement in the quality of life.
e) Cattle shed attached with house	Rs. 2,100/- per shed.		Rs.125000 (suggested in Maharashtra after 2018 floods) Suggested in Maharashtra after 2018 floods)	Rs. 25,000 for cattle sheds where damaged.
Community Infrastructure				
Village / Community Roads		Prime Minister Gram Sadak Yojana	Village Roads Rs. 650 per square meter	Community infrastructure to be added in a recovery plan if communities are being resettled or mass housing is taken. It improves the quality of life as well as recovery. Community infrastructure needs to be planned and costed at the rate of 30 percent of the total costs of relocation / housing. Various Government of India
Drains		Swachh Bharat Mission	1 km side drain @ Rs. 1000 Running Meter for repair and renewal	
Toilets / Waste Water		Swachh Bharat Mission	Common waste water, solid waste treatment Rs. 20 lakh (LS)- adopt organic system	
Street lighting		Various schemes which promote solar energy.	Street lighting 10% of road+ drain recovery	

			(item 1 and 2)	agencies need to be consulted on these specific issues. A final decision could be taken after consulting these agencies.
Livelihoods				
a) Cash for Work		Mahatma Gandhi National Rural Employment Scheme (MNREGS)		MNREGS should be recommended.
b) Assistance for Self-help Groups		Deen Dayal Antyodaya Yojana National Rural Livelihoods Mission (DAY-NLRM)	Rs. 10,000 (grant assistance) and Rs. 100,000 as loan to each SHG (Kerala floods)	In disaster-affected areas, Rs. 10,000 as grant assistance and Rs. 100,000 as loan to the SHGs.
c) Skill Development Programme		Pradhan Mantri Kaushal Vikas Yojana (PMKVY)	Jammu & Kashmir: Training of Artisans in Product Development Cycle for International Market Linkages	All the affected people looking for skill development be provided opportunity under the PMKVY. At least 30 percent should be women.
d) Small and micro enterprises		Prime Minister's Mudra Yojana (PMMY)	The Government of Kerala implemented 'Ujeevana Vayppa Padhathi' vide which the Government of Kerala through Chief Minister's Distress Relief Fund will provide a soft support to MSMEs, Shops and other establishments for	A grant assistance of Rs.10,000 and 25,000 for micro and small enterprises respectively. Shops: Rs. 25,000 Roadside vendors: Rs. 10,000 Eateries, Dhabas and Restaurants: Rs. 25,000 / Rs. 50,000 depending

			availing term loan or working capital by providing up to 25% of the loan amount or Rs. 2 lakh, whichever is lower in the case of term loan and upto 25% of the loan amount or Rs. 1 lakh, whichever is lower in the case of working capital. In case the party desires to avail interest subvention instead of margin money, then he will be provided with a support of 9% interest for upto 1 year limiting to a maximum loan amount of Rs. 10 lakhs.	upon the scale of damage. Loans through PMMY. Insurance coverage should also be encouraged.
e) Market / Production Facilities			Jammu & Kashmir: Composite market centre for whole chain silk activity Composite market centre for whole chain wool activity Development of Kashmir Haat & International Trade Centre	Market / Production facilities to be included in the Recovery Plan. The amount should be recommended on the basis of damage.

Handicrafts / Handloom – Assistance to Artisans				
a) For replacement of damaged tools/ equipment	Rs. 4,100 per artisan for equipment. - Subject to certification by the competent authority designated by the Government about damage and its replacement.		In Jammu & Kashmir Project, the following activities were supported:	Handicrafts / handloom are very important sources of livelihoods for a large number of people. The assistance should be adequate to revise handicrafts / handloom and sustain peoples’ livelihoods.
b) For loss of raw material/ goods in process/ finished goods	Rs. 4,100 per artisan for raw material. - Subject to certification by Competent Authority designated by the State Government about loss and its replacement.		Development of Handicraft and Handloom Cluster E-Commerce portal for Handicrafts and Handlooms	
Rs. 15,000 for equipment Rs. 15,000 for raw materials Rs. 20,000 for training to each artisan A total package of Rs. 50,000 for an individual artisan is an adequate quantum of support. It could also be developed on a group basis.				
Power looms- Assistance to Artisans				
a) For Damage to Power looms	At present, there is no scheme of assistance for power loom industry.			Power looms are an important local industry which are affected by floods.
b)For loss of raw materials / goods in process / finished goods				

				There are three ways in which they need to be supported: Rs. 50,000 per power loom machine and accompanying raw materials, subject to a maximum of 5 machines . Organize concessional loans for power loom owners Encourage insurance for power loom owners.
Agriculture				
Assistance to farmers having landholding up to 2 ha	Rs. 12,200/- per hectare for each item. (Subject to the condition that no other assistance/ subsidy has been availed of by / is eligible to the beneficiary under any other Government Scheme)			It could be done in following ways: a. In course of the assessment, the cost of desilting and other land improvements could be established. It should be presented as recovery needs. b. The desilting and other improvements could be taken with the help of earthmoving equipment. c. The Government may consider supporting this work under the MNREGS. d. If the cost of desilting and other
A. Assistance for Land and other Loss				
a) De-silting of agricultural land (where thickness of sand/ silt deposit is more than 3”, to be certified by the competent authority of the State Government.)				
b) Removal of debris on agricultural land in hilly areas				
c) De-silting/ Restoration/ Repair of fish farms				
d) Loss of substantial	Rs. 37,500/- per hectare to only			

portion of land caused by landslide, avalanche, change of course of rivers.	those small and marginal farmers whose ownership of the land is legitimate as per the revenue records.			improvements does not fit in the MNREGS norms, in that case, the Government may provide financial assistance to individual farmers or farmers' group for land improvement and MNREGS. e. Such assistance could be given to farmers' group so that they take this responsibility collectively. f. Where farmers have lost substantial land, which cannot be reclaimed, in that case, the cost of land could be checked on the basis of registration rates, and the farmers can be compensated on that basis for the precise area of lands they lost subject to a maximum of 1 hectare. g. The Ministry of Agriculture could be asked to provide an alternative scheme of support.
B. Crop Losses				
a) For agriculture crops, horticulture crops and annual plantation crops	Rs. 6,800/- per ha. in rainfed areas and restricted to sown areas. Rs. 13,500/- per ha. in assured irrigated areas, subject to minimum assistance not less than Rs.1000 and restricted to sown areas.		Additional Rs. 6,700 per hectare for paddy crop (Kerala floods) Additional Rs. 6,538 per hectare for vegetables Additional Rs. 56,100 per hectare for Betel Vine Additional Rs. 6,700 per	There are three ways in which recovery for crop losses should be supported: a. Increasing coverage for crop insurance. It is important to convey the farmers that crop insurance is a viable way of recovering some of their losses. b. Decide upon assistance for three category of crops: 1. Food crops; 2. cash crops; 3. horticulture. The assistance should be decided based

			hectare for Sugarcane Additional Rs. 19,500 per hectare for Tobacco Additional Rs. 11,200 per hectare for Cotton	on the extent of damages. There are three categories of damage: a. more than 70 percent; b. more than 35 percent; and c. up to 35 percent. The assistance should be given to all farmers up to a maximum area of two hectares. c. All the farmers who have lost their crops of more than 35 percent should also be given an additional subsistence assistance along with the assistance for crop losses. d. The Ministry of Agriculture could be asked to provide its opinion and the final decision needs to be taken in consultation with the Ministry.
b) Perennial crops	Rs. 18,000/- ha. for all types of perennial crops subject to minimum assistance not less than Rs. 2000/- and restricted to sown areas.			
c) Sericulture	Rs. 4,800/- per ha. for Eri, Mulberry, Tussar Rs. 6,000/- per ha. for Munga.		Additional Rs. 13,200 for Mulberry	
Assistance to farmers having more than 2 Ha of landholding	Rs. 6,800/- per hectare in rainfed areas and restricted to sown areas. Rs.13,500/- per hectare for areas under assured irrigation and restricted to sown areas.			
	Rs. 18,000/- per hectare for all types of perennial crops and restricted to sown areas. Assistance may be provided where crop loss is 33% and above, subject to a ceiling of 2 ha. per farmer.			

Animal Husbandry				
Animal Husbandry- Assistance to Small and Marginal Farmers Replacement of milch animals, draught animals or animals used for haulage	Milch animals - Rs. 30,000/- Buffalo/ cow/ camel/ yak/ Mithun etc. Rs. 3,000/- Sheep/ Goat/ Pig Draught animals - Rs. 25000/- Camel/ horse/ bullock, etc. Rs. 16,000/- Calf/ Donkey/ Pony/ Mule - The assistance may be restricted for the actual loss of economically productive animals and will be subject to a ceiling of 3 large milch animals or 30 small milch animals or 3 large draught animals or 6 small draught animals per household irrespective of whether a household has lost a larger number of animals. (The loss is to be certified by the Competent Authority designated by the State Government). Poultry:- Poultry @ 50/- per bird subject to a ceiling of assistance of Rs 5000/- per beneficiary household. The death of the poultry birds should be	Rs. 232,000 for four cows Rs. 54,000 for six goats (Suggested in Maharashtra after 2018 floods)		Recovery in the animal husbandry sector should not just be about replacement of animals. It should be supported on a Group Beneficiaries basis. The assistance must include support for sheds and forward and backward linkages. It should be supported as a composite livelihood activity. The assistance which is proposed following the Maharashtra floods is a good example that should be followed. The Ministry of Animal Husbandry should be consulted and the assistance needs to be finalized in consultation with the Ministry.

	on account of a natural calamity. Note: - Relief under these norms is not eligible if the assistance is available from any other Government Scheme, e.g. loss of birds due to Avian Influenza or any other diseases for which the Department of Animal Husbandry has a separate scheme for compensating the poultry owners.			
Fisheries				
a) Assistance to Fisherman for repair / replacement of boats, nets – damaged or lost -- Boat -- Dugout-Canoe -- Catamaran -- net (This assistance will not be provided if the beneficiary is eligible or has availed of any subsidy/ assistance, for the instant calamity, under any other Government Scheme.)	Rs. 4,100/- for repair of partially damaged boats only Rs. 2,100/- for repair of partially damaged net Rs. 9,600/- for replacement of fully damaged boats Rs. 2,600/- for replacement of fully damaged net	Pradhan Mantri Matsya Sampada Yojana (PMMSY) Improve availability of certified quality fish seed and feed, create critical infrastructure including modernisation and strengthening of value chains, create direct gainful employment opportunities to about 15 lakh fishermen, fish farmers, fish workers, fish vendors and other rural and urban populations in fishing and allied activities and	Coastal Disaster Risk Reduction Project (CDRRP) The Livelihood Programs, which includes aspects like macro-algal culture, fish cage culture, ready-to-eat products, and the aquaculture eco-park, benefitted 300 families' livelihoods, with 400 additional families projected to benefit from the project. In Tamil Nadu, nearly \$60 million were invested	The PMMSY should be the basis for supporting the recovery in this sector. The norms as available under this scheme should be applied. Recovery in fisheries sector should be considered as a composite livelihood activity. The Department of Fisheries should be consulted and the recommendation for assistance to fisher communities should be taken in consultation with the Department.

		about thrice this number as indirect employment opportunities including enhancement of their incomes.	in two fish landing centres, reconstruction and modernization of two fishing harbors, providing permanent opening for two river bar mouths and establishing one tube ice plant.	
b) Input subsidy for fish seed farm	Rs. 8,200 per hectare. (This assistance will not be provided if the beneficiary is eligible or has availed of any subsidy/ assistance, for the instant calamity, under any other Government Scheme, except the one time subsidy provided under the Scheme of Department of Animal; Husbandry, Dairying and Fisheries, Ministry of Agriculture).		In Puducherry, a newly built 37,886 square-foot Puducherry Modern Hygienic Fish Market provides safe and hygienic fish storage, processing, and selling practices in adherence to the international standards.	
Dam Walls				These projects need to be taken up through regular the regular budget of Irrigation Department. Estimates can be developed for these projects. On the basis of these estimates, funds should be allocated.
Embankments				
Major Irrigation Projects				
Minor Irrigation Projects				On the basis of estimates of damage, funds can be allocated for major repairs to Minor Irrigation projects.
Infrastructure				

a. Transportation				
Village Roads	The NDRF / SDRF norms allow for immediate repairs and restoration, not reconstruction.	It is difficult to lay down norms for these components as the local conditions and schedule of rates differ across the states.	The World Bank reconstruction projects include reconstruction of roads. However, for each of these components, the estimates are prepared, and the construction is undertaken following the World Bank procurement procedure.	On the basis of estimate of damage to different types of transportation and water structures, estimates need to be prepared. The Schedule of Rates established in the state for various components need to be applied. The reconstruction plan should be prepared specifying the time over which reconstruction would take place.
District Roads				
High ways				
Express ways				
Municipal Roads				
Bridges (Small & Big)				
Culverts				
Water Channels				
Education	The NDRF / SDRF norms allow for immediate repairs and restoration, not reconstruction.	It is difficult to lay down norms for these components as the type and size of schools, and schedule of rates differ across the states.	The World Bank reconstruction projects include reconstruction of schools. However, for each of these components, the estimates are prepared, and the construction is undertaken following the World Bank procurement procedure.	Only those education institutions which are funded and run by the Government need to be financially supported. Based on the estimates of damage for each category of educational institution and schedule of rates established in the state, a decision needs to be taken on allocation for recovery.
Primary school				
Middle school				
Higher secondary school				
College				
Other educational institutes				
Health				
Primary Health Centre	The NDRF / SDRF norms allow for immediate repairs and restoration, not reconstruction.	It is difficult to lay down norms for these components as the type and size of schools, and schedule of rates differ	The World Bank reconstruction projects include reconstruction of health centres. However, for each of these components, the estimates	On the basis of estimate of damage to different types of health facility, estimates need to be prepared. The Schedule of Rates established in the state for various components need to be applied.
Community Health Centre				
Hospitals				

		across the states.	are prepared, and the construction is undertaken following the World Bank procurement procedure.	The reconstruction plan should be prepared specifying the time over which reconstruction would take place.
Drinking Water	The NDRF / SDRF norms allow for immediate repairs and restoration, not reconstruction.	It is difficult to lay down norms for these components as the components of drinking water system and their dimensions as well as schedule of rates differ across the states.	The World Bank reconstruction projects include reconstruction of drinking water systems. However, for each of these components, the estimates are prepared, and the construction is undertaken following the World Bank procurement procedure.	On the basis of estimate of damage to different types of drinking water systems and sources, estimates need to be prepared. The Schedule of Rates established in the state for various components need to be applied. The reconstruction plan should be prepared specifying the time over which reconstruction would take place.
Pipeline water supply				
Wells				
Ring wells				
Hand pumps				
Spring tapped chambers				
Public stand posts, cisterns				
Power				
Cables	The NDRF / SDRF norms does not cover power sector.	It is difficult to lay down norms for these components as the patterns of damage may differ across the states.	The World Bank reconstructions projects do include substations and power transmission lines. However, the estimates are prepared and the World Bank procurement procedure is followed.	The electricity company should undertake these works. Wherever necessary, the State Government may provide some assistance.
Poles				
Equipment				

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