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Resilient India - Disaster Free India

Sphere India
National Coalition of Humanitarian Agencies in India

SHELTER

HANDBOOK OF MULTI-SECTOR COORDINATION FOR EMERGENCY RESPONSE IN INDIA

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Handbook Of Multi-Sector Coordination For Emergency Response In India

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Sphere India Secretariat
B-94, Sector 44,
Noida, Uttar Pradesh, 201303.
Email: info@sphereindia.org.in
Website: www.sphereindia.org.in

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The National Institute of Disaster Management (NIDM) is one of the pioneer institutes under the Ministry of Home Affairs, Government of India which has been mandated to promote capacity building interventions in Disaster Risk Management (DRM). Since its inception, the Institute has been proactive in raising the level of awareness and preparedness in dealing with disasters and emergency situations in the country, as well as making DRM education accessible to people across different level of stakeholders.

Sphere India: Sphere India, is a national coalition of humanitarian agencies in India with a vision to build a disaster resilient India by promoting quality and accountability in humanitarian action through processes of collaborations at various levels. The members include key nodal agencies from Govt. of India, UN agencies, INGOs, NGO networks and national NGOs. Sphere India facilitates inter-agency coordination, training and capacity building, knowledge management and collaborative advocacy to protect the rights of the people affected by disasters and other humanitarian crisis.

Preface

Our aim is to enhance capacities and knowledge management system for emergency preparedness and response for improving quality of humanitarian action. In this handbook, we have sought to include practical guidance and advice on how different stakeholders and sector actors (NGOs, CSOs, UN Agencies and Indian Government) can come together to strategize sector preparedness and response in emergencies. It highlights key principles of humanitarian action and how coordination and joint efforts can increase the effectiveness and efficiency of interventions and promote better outcomes.

This handbook was drafted after numerous consultative meetings and write shops with sector experts from local and national organizations working in the shelter sector. Extensive research and discussions have taken place between authors of the sector before finalising the handbook. Inputs have been collected and collated from various experts across the field throughout the handbook drafting process. Sector wise consultative meetings were also organized to invite inputs from the Government and wider membership.

Sphere India would like to thanks UNNATI, Habitat for Humanity, Catholic Relief Services, All India Disaster Mitigation Institute, SEEDS India, World Vision India and all who have contributed their knowledge, expertise and time to make this edition of handbook, a possible venture. We are also grateful to collaborative partners and other CSOs, FBOs, CBOs, corporations, institutions, Government departments and officials for their continued support and active participation in various consultations which helped us in facilitating the handbook.

Vikrant Mahajan
CEO, Sphere India

Sphere India
National Coalition of Humanitarian Agencies in India

Foreword

Disasters and disaster risks are on the rise. They negatively impact children's and women's rights, disproportionately affecting poor countries, and erode development gains are a setback for progress. Disasters, thus exacerbate already existing vulnerabilities and inequalities of boys, girls, women and men. As disasters are a function of hazard, vulnerability, exposure and capacity, they are both a humanitarian and a development concern. With a mandate combining humanitarian and long-term development action, UNICEF recognises its crucial responsibility to integrate disaster risk reduction across its work. This calls for a concerted effort on the part of several sectors, including national, state and local governments, activists, NGOs, at-risk communities, etc.

Partners can support state governments to strengthen the capacity of the community-based workforce as well as other levels of the system by promoting risk-informed actions from development systems; advocating for resource allocation and making investments (e.g. funding, technical support, human resources and supplies) for prevention, mitigation, preparedness and response actions addressing at household, community, and facility, safety and security level; supporting institutionalization of capability to enable continuity of access to social-sector services during emergency and eventual early recovery of services. UNICEF is committed to support the governments and CSOs to define and acquire the core competencies for emergencies, and the development of necessary guidance, training materials and tools; making use of the capacities and capabilities of the existing actors in this workforce, and promoting partnerships to link humanitarian and development domains.

This handbook is a resource that can be extensively used by all concerned authorities in the field of disaster risk management, which shall act as an operational manual for coordination during preparedness as well as response phases of emergencies.

Tom White
Chief DRR
UNICEF India

unicef

Foreword

The year 2020 was full of challenges, as the global health crisis brought humanity to a virtual standstill. The difficult times have changed the way organizations operate, and now we have started adapting to the new emerging socio-economic order.

The role of CSR has become more relevant than ever, as corporates played a crucial role in supporting the nation in the fight against the pandemic and other disasters witnessed last year. HCL Foundation, along with partner organizations, has been working significantly to mitigate the humanitarian crisis. Through its various flagship programmes and special initiatives, it has positively impacted 2.14+ million human lives, spanning 21 states and 2 union territories of India.

It was the commitment and resilience of our communities, teams and partners that helped us navigate through the situation, and keep our efforts sustained. Going forward, I feel that organizations must start working towards strengthening of preparedness and unified emergency response systems. At HCL Foundation, we remain committed to addressing the socio-economic concerns while focussing on humanitarian aid and assistance. Our CSR programmes have the potential to bring value to the preparedness, response, and recovery systems by aligning corporate citizenship efforts to sustainable development processes.

The formulation of Handbook of Multi-Sector Coordination for Emergency Response in India (Shelter), through joint efforts of Sphere India and partner organizations, shall act as an operational manual for coordination during emergencies and help improve the disaster management in the country and thus, mitigating the disaster risks.

Nidhi Pundhir
Director, HCL Foundation

HCL FOUNDATION

From Director's Desk

Shelter plays a vital role in large-scale disasters and is an important part of disaster response and recovery. The DDR mechanism aims at providing private and secure places for people to live who have left or lost their usual accommodations due to some form of disaster. It not only provide immediate and short-term shelter for the victims of a disaster, but also help them to recover from the trauma of a disaster as well as provide a base to start the process of rehabilitation.

There are lots of elements affecting directly a disaster management system. The critical point is the quick response and it depends on the type of occurred disaster, the number of affected people, the resources needed and available locally, and the easiness to work on the area. The enlarged involvement and the awareness level of the citizens accompanied by the increased responsibility of local authorities and NGOs would support the agility and the effectiveness of the whole system. The improved local responsibility under coordination centre helps in efficient running of the system.

The most important goal must be to build a disaster-resilient community. Re-development models should lay emphasis on a pre-urban planning of structures to make structures resilient and disaster effective. So, partnership with knowledge partners to lay stronger foundations for resilient shelter ecosystem, has to be forged in this direction for achieving the same.

To strengthen preparedness and unified emergency response, Sphere India and its members have drafted a ***Handbook on Multi-Sector Coordination for Emergency Preparedness for Response*** (Shelter), which shall act as an operational manual for coordination during emergencies. This shall enable collaboration among different stakeholders in disaster management and thus, mitigating the disaster risks.

Major Gen. Manoj Kumar Bindal
Executive Director
National Institute of Disaster Management

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Acknowledgement

The chapters in this Sphere India's Multi-Sector Handbook (dedicated to shelther sector) are the result of a diverse consultation process amongst shelter experts in India and globally. Sphere India gratefully acknowledges the scale and breadth of the contributions made by: UNNATI, Habitat for Humanity, Catholic Relief Services, All India Disaster Mitigation Institute, SEEDS India and World Vision India. The working process to develop this handbook was coordinated by Sphere India via several online zoom meetings. We sincerely thanks Shri Anil Kumar Sinha- IAS (retired) for supporting and moderating these sessions. Most of the writeups were put forward by their home organisations, dedicating their time and effort as an in-kind contribution to the sector. Sphere India acknowledges their valuable contribution made between June 2020 and December 2020.

Sphere India also extends special thanks to Major General Manoj Kumar Bindal (Executive Director- NIDM) and Nidhi Pundhir (Director, HCL Foundation) for overall guidance and to Anil K. Gupta (Professor- NIDM) and Santosh Kumar (Professor- NIDM) for their critical editorial inputs.

Lead Author/s

Mr. Justin Jeba kumar from Habitat for Humanity

Section Authors and Reviewers:

- Mr. Binoy Acharya – UNNATI
- Mr. Praveen – Habitat for Humanity
- Mr. Sailendra Pattanaik – Catholic Relief Services
- Mr. Balaji – World Vision India
- Mr. Mihir Bhatt – All India Disaster Mitigation Institute

Sphere India Secretariat Team: Ms. Anushyama Mukherjee, Dr. Eilia Jafar, Mr. Paritosh Mulay, Ms. Nupur Tyagi, Ms. Saadia Siddiqui, Mr. Vaibhav Mahajan and Mr. Vikrant Mahajan.

Inputs by Multi-Sector Strategic Leads: Sarbjit Singh Sahota (UNICEF), VR Raman (Water Aid), Vijay Rai (WHH), Hansen Thambi (World Animal Protection), Tushar Das (Plan India), Mihir Joshi (SEEDS), Ambarish Rai (RTE Forum), Marije Broekhuijsen (UNICEF), Abner Daniel (UNICEF), Pradnya Paithnkar (WFP), Ramachandra Rao Begur (UNICEF), Dr Vivek Virendra Singh (UNICEF), Lee Macqueen (NCDHR), Shivani Rana (Change Alliance), Rama Dammala (Child Fund), Pankaj Anand (Oxfam), Wasi

Alam (CARE), Dr Sujeet Ranjan (Nutrition Coalition), Justin Jebakumar (Habitat for Humanity), Dr Ritu Chauhan (WHO).

Consultative Inputs from Key Stakeholders

- Shri Anil Kumar Sinha- IAS (retired). Former Vice Chairman, Bihar State Disaster Management Authority (BSDMA), Patna
- Smt. Aditi Umrao- Project Director (Emergency Operation), UP SDMA
- Mr. Rajesh Dutta- Assam State Disaster Management Authority
- Shri. J Mawthoh- DDMO, West Khasi Hills District
- Dr. Amir Ali Khan- NIDM Professor
- Marshal Kumar, HCL Foundation
- Shruti Misra, HCL Foundation

About Sphere India

Sphere India is a national coalition of humanitarian agencies in India. The members include key nodal agencies from Govt. of India, UN Agencies, INGOs, NGO networks and national NGOs. Sphere India facilitates inter agency coordination, training and capacity building, collaborative advocacy, and information, knowledge and learning management through a collaborative process for quality and accountability.

	Right to live life with dignity.
	Right to assistance and protection.
	Principles of humanity impartiality, neutrality, independence, and other principles of Red Cross Code of Conduct.
	Inclusion.

The above mentioned points are grounded in Sphere India's commitment to the Article 21 of Indian Constitution on *Right to Life* and its interpretations in various judicial proceedings, Universal Declaration of Human Rights, International Humanitarian Law, Refugee Law and the associated treaties and covenants.

Composition of Sector Committees

SPHERE INDIA SECTOR COMMITTEE MEMBERS		
WASH	**SHELTER**	**FOOD & NUTRITION**
Oxfam India (Lead) UNICEF (Co-Lead) Water Aid CARE India EFICOR PGVS GIWA Wash Institute REDR ADRA India Plan India HI Ambuja Cement Foundation	HCL Foundation SEEDS Habitat for Humanity India (Lead) CARE India (Co-Lead) AIDMI NCDHR UNNATI HCLF	WFP (Lead) UNICEF India (Lead) CFNS (Co-Lead) CARE India EFICOR IGSSS World Vision India Oxfam World Animal Protection ACF Save the Children HCL Foundation
HEALTH	**PROTECTION**	**EDUCATION**
WHO (Lead) Doctors For You (Co-Lead) Handicap International CARE India ADRA ChildFund Water Aid HCL Foundation Cipla Limited Cipla Foundation Adani Foundation World Vision India UNICEF Save the Children ICRC OXFAM India PCI IPPF EHA Americares India	Caritas (Proposed Lead) OXFAM (Proposed Lead) NCDHR CARE India Child Fund Islamic Relief IGSSS CRS Handicap International IPPF ADRA TDH UNNATI WV Change Alliance Save the Children IPPF SAFA HCL Foundation	Save the Children (Sector lead) UNICEF (Co-Lead) CARE India ChildFund India World Vison India Oxfam RTE Forum HCL Foundation Sterlite EdIndia Foundation Bharti Foundation DLF Foundation

About the Handbook

This Shelter Sector Coordination handbook provides practical guidance and advise on how different stakeholders and sector actors (NGOs, CSOs, UN Agencies and Government) can come together to strategize sector preparedness and response, during emergencies. It highlights key principles of humanitarian action and how coordination and joint efforts among different sector actors can increase the effectiveness and efficiency of interventions to promote better outcomes.

Process of Drafting the Multi Sector Coordination Handbook

The Multi Sector Coordination Handbook has been drafted under the ***Network Approach to Emergency Preparedness for Response***, after numerous consultative meetings and write shops with sector experts from local and national organisations working in the fields of education, health, food and nutrition security, WASH, shelter, and protection.

After initial consultations with sector leads, starting from the month of January 2020, the outline of the handbook was developed and discussed in the sector committee meetings of six sectors held in February 2020. Interest from sector committees and other sector experts was sought and nominations were completed by April. The inception of the handbook began in the first week of May 2020. Introductory meetings were held with each of the six sector committees wherein Sphere India presented a prototype of the handbook to elucidate the desired chapters and content to be produced.

Following this, lead authors, section authors with support from Sphere India secretariat began drafting the handbook. Sector-wise meetings as well as multi-sector meetings were held for discussions. During the drafting of the handbook, three multi-sectors write shops and consultations with multi-sector strategic leads were held along with 24 sector authors meetings.

Extensive research and discussions have taken place with authors of the sector before finalising the content. Inputs have been collected and collated from various experts across the field throughout the process of drafting the handbook. Further, sector wise consultative meetings were held inviting inputs from the Government and its wider membership.

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Roles and Functions of the Sector Committee

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2. Recovery coordination.
3. Coordination for DRR activities of Sphere India members.
4. Coordination with IAGs at district and state levels for the above roles situations.

Roles of the Sector Lead

1. Use the lead agency's existing working relations with the national authorities and non-state actors active in the sector, to facilitate their participation in the sector.
2. Maintain appropriate links and dialogue with national and local authorities, CSOs, and other stakeholders.
3. Make the technical expertise of lead agency available for sector and inter-sector assessments.
4. Participate actively in strategy development.
5. Ensure that sector plans take appropriate account of national sector policies.
6. Ensure that all sector committee members are aware of relevant policy guidelines and technical standards.
7. Promote/ support training of sector members.
8. Hold regular coordination meetings.
9. Collect information from all partners on Who's Where, since and until When, doing What, and regularly feed the database managed by Sphere India.
10. Represent the sector in inter-sector coordination mechanisms.
11. Assess and monitor available sector resources.
12. Mobilize sector partners to contribute to establishing and maintaining appropriate 'Early Warning System'.
13. Ensure that sector needs are identified by planning assessments.
14. Head and contribute to sector analysis of information and data leading to identification of gaps in sector response.

15. For recovery planning, or in protracted crisis, ensure incorporating building back better, and risk reduction measures.
16. Lead sector contingency planning.
17. International NGOs and CSOs to utilize their networks in a comprehensive manner for provide guidance to the government.

Roles and Responsibilities of the Sector Coordinator (Sphere India Secretariat)

1. The Sector Coordinator, commonly known as Focal Point shall coordinate for execution of the annual plan under the guidance of committee, Chair, Co-chair of committee and CEO/SPM (Senior Program Manager) of Sphere India.
2. The Focal Point shall have monthly meetings with the Chair and the CEO / SPM to update and seek guidance on developments on processes, projects, new initiatives taken and individual development.
3. The Focal Point shall have frequent meetings with members individually.
4. The Focal Point shall share the monthly report with the Chair and the CEO/ SPM.
5. The Focal Point shall take minutes of all the committee meeting and circulate it to members.

Main Functions of the Committee

1. To draft the long-term strategic plan for the sector.
2. To approve annual plan of actions with programmatic and financial details.
3. To review the progress on plan implementation and utilization of budget quarterly.
4. To guide and support executive team for collaborative advocacy.
5. To elect chair and vice-chair for the committee.

Meetings of the Committee

1. The committee shall meet once every quarter. The dates should be fixed in advance falling under first week of the months of February, May, August and November.
2. The special meetings of the committee meeting can be convened as required.
3. The committee meetings should be professional with agenda approved by the subcommittee chair and the CEO/SPM.
4. The member organizations shall appoint a point person to attend the meetings and represent in committee.

5. All important decisions including election of chair, approval of plans and activities shall be final only if there is a minimum quorum of the 50% of the committee strength in the meeting.

Sector Committee Composition

1. The composition of the sector committees must be diverse. Efforts are made to have an inclusive committee with prominent representation from local NGOs, all caste groups, different genders and different regions.
2. In order to enhance local representation, the sector committee must ensure that either the Sector Lead or Co Lead is a member of a local organisation.

Formation of the Sector committee

Following a participatory process, the formation of sector committee is carried out. Sphere India Secretariat sends out an email to all its members inviting them to be a part of sector committees. Furthermore, members are requested to nominate sector specialists or focal persons for the sector within their organizations. Terms of reference of the committee are also sent along with this email. The desired committee size is 8-10 members however, in the event that more nominations are received, preference is given to members who were not a part of the sector committee in the previous year. Nominations for the Chair/Co-Chair are received and finalised based on consultations with the CEO or the Chair/Vice- Chair of Excom.

Introduction: Shelter Sector

INTRODUCTION

According to a statistics, 68% of India's land is prone to drought, 60% to earthquakes, 12% to floods and 8% to cyclones, making India one of the most disaster-prone countries in the world, affecting overall 85% of Indian land and more than 50 million people. There have been countless disasters both natural and man-made, where millions of lives have been lost.

Shelter plays a vital role in large-scale disasters and is an important part of disaster response and recovery. The DRR mechanism is used to provides private and secure places for people to live who have left or lost their usual accommodations due to some form of disaster. It not only provide immediate and short-term shelter for the victims of a disaster, also help them to recover from the trauma of a disaster as well as provide a base to start the process of rehabilitation.

A lack of adequate consideration with regard to climatic conditions, locally available materials and skills, cultural and social issues, delays, cost constraints, and poor location selection for shelter may be a source of poor performance contributing to an unacceptable standard of living. Moreover, there seems to be a lack of sufficient consideration with regard to the design of DRR shelter for future storage and re-use in most cases.

Stakeholder Analysis and Coordination

STAKEHOLDER ANALYSIS AND COORDINATION

Role of Government Departments

Pre-disaster Phase:

Roles of the relief commissioner in pre-disaster phase

Relief Commissioner chairs the Crisis Management Group (CMG) and heads the control room.

- State Relief Commissioners are in charge of the relief and rehabilitation measures in the wake of natural disasters in their States and function under the overall direction and control of the state level committee.
- NDMA, SDMAs, DDMAs and local authorities should identify / map-out the weak and vulnerable infrastructures and support in strengthening them to minimise the impact of the disasters and avoid losses.
- Appropriate provisions for financial support under the housing and infrastructure development schemes should be made for feasible construction of resilient houses based on the hazard zones to help sustainable development and mitigate the infrastructural losses. Provision for repair and maintenance of the weak and vulnerable infrastructure and shelters before disaster seasons.
- Framing policies to support each affected household in a disaster regardless of the land possession and record of right that might keep the affected from accessing house damage compensation and other related assistance from government.
- NDMA, SDMAs, DDMAs and local authorities should coordinate, collaborate, advise and support the NGOs and various government departments in analysing, planning and implementing disaster risk reduction programs in a collaborative, sustainable and inclusive manner.

The role played and the functions performed by the District Collector in district administration can be studied under the following heads

1. Revenue Administration
2. Law and Order Administration
3. Development Administration

The DC's role can be elaborated upon and minimum standards be set in terms of DRR related duties; for instance:

- S/He acts as the crisis administrator-in- chief during natural calamities and other emergencies.
- As a head of district administration, S/He deals with personnel matters of the district staff.

- S/He is responsible for civil supplies–food and other essential commodities.
- S/He handles work pertaining to civil defence.
- S/He maintains liaison with military authorities.
- Provisions should be made for socio technical assistance under the housing scheme for every housing beneficiary to construct disaster resilient permanent houses.
- Government should build the capacity of officials and local masons on disaster resilient construction and retrofitting of feasible vulnerable structures.
- Government should encourage and promote insurance products for risk transfer against house damage.
- Government should work with different research institutions to come up with alternative disaster resilient building construction materials and designs and promote them as appropriate.

During Disaster:

- Along with disaster warning dissemination, governments should also consider dissemination of messages on cutting and pruning the weak branches of existing trees those that may fall on the buildings and damage the infrastructure on a larger extent.
- All the private or public accommodation or buildings have been identified to be used for shelter evacuees and after used as shelters, all rooms and surfaces should be cleaned and disinfected before handover for original uses.
- Adequate sheltering facilities with required equipment should be provided to evacuees, keeping the prevailing scenario of infectious diseases in mind.
- Establishment of a centralized command chain- for eg; from DDMA at district level, further dissemination of authority and resources can take place between other key stakeholders such as; District Medical & Health Officer, Police, the Civil Defence and Home Guards, the Fire and Emergency Services.

Post Disaster:

- Create scope for all the actors to support the affected community with their capacity and available resources.
- Create platforms to operationalise shelter sector as well as inter-sectoral coordination at all levels starting from district to national level in the aftermath of a disaster. Government representatives should actively lead and take part in sector coordination and facilitate smooth functioning of the sector ensuring required support.
- Periodic monitoring and review of the plan of action prepared for shelter sector coordination and advise as required.
- Ensure robust systems of selection of housing beneficiaries, which should be inclusive of all disaster affected households, at community level.

- Promote productive partnership with Media houses, CBOs, NGOs, INGOs and the Corporate Sector in the areas of awareness generation, preparedness, mitigation, recovery, reconstruction and capacity development at each level.
- Making reconstruction an opportunity for the affected community to build-back better constructed disaster-resilient infrastructures to reduce the losses.

An Example of Bhuj Reconstruction: Key Takeaways for Coordination During/ After Disasters

- A coordinating umbrella organization, Abhiyan, had sponsored and setup earthquake rehabilitation support centres (also known as setus), which are village level information and coordination units.
- UNDP-supported demonstration houses in 25 villages were replicated across the 300 villages covered by the Abhiyan Network, in turn influencing the design and implementation of projects by other CSOs, government agencies and the private sector.
- Taking this further, UNDP spearheaded watershed and drought-proofing programmes with CSOs under the umbrella of Jan Vikas. EPC provided technical inputs, in coordination with Abhiyan Network and Aga Khan Foundation, for community-based ecological planning modules to ensure security of livelihoods in drought-prone villages. In collaboration with SEWA.
- UNDP implemented a gender-sensitive water security programme in Patan. Caritas, Lions Club, Sampoorna Bamboo Kendra and Behavioural Science Centre have, with UNDP support, executed temporary shelter programmes for the urban displaced in Bhuj.
- The setus were uniquely placed to act as links between the spectrum of agencies in the rehabilitation process – from the district administration to international organizations to local CSOs. By serving as a bridge between the administration and the village community, the setus enabled the latter to avail of schemes that were meant for them. The NUNV engineers deputed at the setus, for example, helped to propagate seismic safety features in reconstruction, which were essential for villagers to obtain government certification and timely installments of financial assistance. The setus linked the Government and CSOs, helping the former to keep track of rehabilitation and the latter to navigate government procedures. The setus also drew CSOs to villages for the first time.

Key Lesson Learnt

Build Strategic Partnerships: The Gujarat experience shows that successful transition recovery processes turn on effective partnerships and the development of coordination mechanisms at different levels. A synergistic alliance with a community-based civil society organization with a proven track record and

constituency is especially critical at the local level. It is equally important for UNDP to manage the partnership with CSOs with discretion, so as not to generate a backlash for the partner concerned or overwhelm it. These partnerships need to be backed nationally and globally with better interfaces with existing interagency mechanisms to coordinate the emergency phase and with multilateral financial institutions, which support long term reconstruction. At present, inter-agency disaster management teams have a clear mandate for coordinating emergency management, but not necessarily for transition recovery. Partnerships with international CSOs also need to be built.

Role of Media (Both print and electronic)

Media as the watchdog plays very important role in a democratic country like India. In the history of India, media has been recognized as influential, patriotic and trust-worthy in the socio, economic and political climate of the nation. The traditional form of print media along with the modern version of media like television journalism and the widely prevalent social media like WhatsApp, Twitter, Instagram, YouTube, Facebook, etc. which are doing countless contributions in the modern society. The present media houses have an organized means of reaching out to a lot of people, quickly, effectively and efficiently through modern scientific technologies.

Pre-disaster Phase:

1. They should critically analyse the policies, plans and programs and raise voice against the faulty decisions of the policy makers and supporters that adversely impact the people living with disasters.
2. Disaster Education of the community considering disaster preparedness including how to react to an early warning message, prevention, mitigation, lifesaving skills and various provisions of government. These tasks can be carried out on the basis of the dual role of media related with providing information and analysing disasters perceptively.
3. Disseminate the disaster warning messages from authentic sources and include action points for sheltering facilities and making the shelters safe that can protect the communities from the anticipated impact of the disaster without panic.

During Disaster:

1. During and in the immediate aftermath of a devastating disaster when the communication disrupts and people have limited access to vital information, rumours can have enormous impact on the relief operations. At that point of time, media can play a role of monitoring such rumours by disseminating correct information about the measures being taken by appropriate authorities and agencies.

2. In controlling law and order situation, media can keep a watch on antisocial elements who try to take advantage of such adverse situations. They can report such matters to assist the law and order maintaining authorities in restoring peace and harmony in the disaster affected communities.

Post Disaster Phase:

1. The provisions and government compensation packages relating to shelter damage need to be disseminated clearly and widely.
2. Present the unbiased ground reality of the disaster impact to mobilize human, material and financial resources for the affected community. Disclose the sufferings as well as needs of the affected community to attract the attention of wider audience and government.
3. Through investigative journalism, media houses should find out the gaps and lapses in shelter programming and share the evidence-based truth for appropriate decision making and justice at all levels.
4. Media can give voice to the vulnerable voiceless population which makes the democracy even further democratic and the shelter assistance can reach out to the last-mile worst hit households and enhance resilience.

Role of NGOs (Local and International)

Pre-disaster Phase:

1. The role of the humanitarian agencies like. CBOs, NGOs and INGOs is to supplement and complement the efforts of the government in disaster preparedness, response, mitigation and reconstruction thereby helping communities to prepare for, cope with and recover quickly from the impacts of devastating disasters and protect their shelters and infrastructures.
2. Capacity building of the community considering disaster preparedness including how to react to an early warning message, prevention of shelter damage, mitigation measures for protection of shelters and infrastructures, lifesaving skills and various provisions of government relating to shelter resilience and safeguarding.
3. Larger organizations should work with domestic NGOs to leverage their local rapport and ensure a more cohesive response during emergencies.
4. The NGOs and INGOs can incorporate global experiences and enrich the construction process to enhance resilience.
5. Support in preparation of contingency planning at different levels to protect the shelters and infrastructures, stockpiling of tools and equipment, arrangements for associated training, exposure and field exercises. They can also be helpful in identifying community level appropriate shelter facilities for evacuees. Inter-agency contingency planning- to be based on knowledge and capacities.

6. NGOs should actively participate in the GO- NGO shelter sector coordination mechanism and provide necessary support in managing and sustaining the ongoing coordination at different levels.
7. NGOs should review various policies pertaining to shelter and infrastructure sector, advocate and raise issues at different levels that need the attention of different stakeholders and ensure that the existing concerns are addresse. The advocacy efforts would primarily focus the difficulties of vulnerable with analysis and sufficient information which will help concern authorities at different levels to take better decisions.
8. The local NGOs and CBOs should support in generating awareness on selection criteria and identification of appropriate eligible beneficiaries from community for shelter support under different housing schemes of government.
9. Generate awareness among the community on insuring their shelters for transfer of risk of expected damages from devastating disasters.

During Disaster:

1. Support in disseminating authentic warning messages to the community along with suggested actions to protect or safeguard the houses and infrastructures. The suggested activities may include following specific evacuation routes to preidentified shelters, carrying Family Survival Kits and Personal Protection Equipment and proper maintenance and management of the shelters for evacuees.
2. Coordinate with appropriate authorities for proper arrangements of logistics at the shelters for evacuees and inform about the needs for better management of the emergency shelters for evacuees.
3. Bridge the language and cultural context barrier faced by NDRF while conducting evacuation and rescue operations by assisting the force.

Post Disaster Phase:

1. NGOs should support in sectoral assessment of shelter and present the damage scenario of the affected population.
2. Present the shelter recovery and reconstruction requirements before different stakeholders for mobilization and allocation of resources.
3. Advocate for the requirement of special compensation provisions for inclusion of all affected considering the most vulnerable households who are generally excluded due to many legal and social reasons.
4. Empower the communities by creating awareness on different Disaster Resilient Construction Techniques (DRCTs) through their respective institutional mechanisms. NGOs should collect and share the proven DRCTs in construction of transitional shelters and retrofitting.

5. NGOs should collaborate with government and provide socio technical assistance to the beneficiaries under different housing schemes to construct disaster resilient permanent shelters.
6. NGOs should bridge the gap between support providers (including government) and vulnerable population to come up with disaster resilient shelters.
7. NGOs should undertake cash and voucher- based approaches to support the affected households where construction markets are operational that can ensure owner-driven reconstruction.

Role of Corporates

Pre-disaster Phase:

8. The corporates should plan and allocate budget provisions for the capacity building and strengthening of weak shelters and infrastructures under their peripheral development funds.
9. Corporates should train their staffs on assessment, planning and monitoring so that they can be deployed post-disasters to assess and come up with specific needs of the disaster affected communities.
10. Corporates under their corporate social responsibility should provide corpus and or revolving funds to the disaster-prone communities to strengthen their houses and infrastructures and enhance disaster resilience.
11. They should come forward to provide necessary support to the government and NGOs to take up public awareness campaigns on resilient housing and infrastructures in the disaster-prone areas beyond their periphery to prepare the communities to reduce loss and damage to their houses and infrastructures.

During Disaster:

1. The corporates should keep watch on the situation after dissemination of warning by government and actively prepared to respond immediately after the disasters with necessary shelter materials as there is experience of delay in addressing shelter needs post-disasters.

Post Disaster Phase:

1. The corporates should also partner with local financial institutions and civil society organizations to extend immediate required support for the repair and retrofitting of the houses and infrastructure for build back better and quicker.
2. They should promote resilient housing and good construction practices among the affected communities.
3. Roles of services, inclusive of both – hardware and software- education and communication campaigns simultaneously.

Role of Construction Market Actors

Pre-disaster Phase:

Construction Material Manufacturing Companies

1. Construction companies should partner with organizations piloting tests to make sure they are using construction materials that withstand extreme conditions.
2. The manufacturing companies should manufacture and promote disaster resilient construction materials.
3. Construction companies should build the capacity of the workforce on resilient construction techniques along with the promotion of their construction materials.
4. Construction material manufacturing vendors should pre-manufacture several materials in demand including pre-casted concrete pillars before hand and keep ready for use by the affected.

Construction Material Suppliers and Vendors

1. The construction material suppliers and manufactures should promote and supply appropriate disaster resilient construction materials to increase resilience and durability of the shelters and infrastructures.
2. They should enhance awareness of the construction workforces like masons, carpenters and support staffs on the longer-term benefits of the materials in disaster prone areas.
3. Organize interface meetings of the workforces with the manufacturers and their team to explain the basics and disaster resilient features of the materials.
4. Demonstrate the resilient materials at their vending zones.

Bankers and Lending Institutions

1. Should develop products for small scale but longer-term lending in housing loans for the house owners/beneficiaries of low-income group.
2. Bankers should encourage the house owners to avail housing loans and ensure regular community level collections in their operational areas through collection agents like MFIs.
3. DDMA and corporate banks along with MFIs can play a huge role in post disaster state for those reconstructing homes especially being an opportunity for ensuring gender equality and women empowerment to be ensured in land entitlements and home ownership may be added to the handbook.
4. Bankers and lending institutions should advise and provision for risk transfer of the loans even for the low-income group and vulnerable families staying in disaster prone areas.

MFIs

1. The vulnerable communities have very good access to the MFIs because of easy door-step hassle-free lending and door-step collection even if with a high rate of interest, MFIs should develop products for small scale and longer-term lending in housing loans along with the livelihood supports. The rate of interest should be at par with the market or even a little higher for the housing loans as it is not a productive loan. They may also allow top up loans for the regular repayers if interested to avail small scale housing loans.
2. MFIs should incorporate provisions for risk transfer mechanisms of the longer-term housing loans the low-income group and vulnerable households.

Workforce Associations: (Association of Labours and Masons)

1. The Construction Worker's Associations should coordinate and collaborate with different companies and organisations for capacity building supports to enrich the knowledge and skills of their working active members on disaster resilient construction techniques, retrofitting techniques and procedures of providing appropriate Socio-Technical Assistance (STA) to the vulnerable households.
2. The associations should plan interactions between peer to peer and engineers for sharing of latest construction technologies and changes in the technical guidance by government from time to time during pre-disaster periods.

During Disaster:

Construction Material Manufacturing Companies

On issue of disaster warning, construction companies should make sure that their staff and equipment should be protected from the impact of disaster and can be deployed in the affected areas for support in immediate shelter recovery.

Construction Material Suppliers and Vendors

The construction material suppliers should properly store their materials that can be used immediately after the disaster in rebuilding, repairing and retrofitting of the houses.

Bankers and Lending Institutions

During the disaster, the financial institutions should advise their housing loan clients to preserve the insurance documents and generate required evidential proof to facilitate hassle-free risk coverage by insurance companies.

Post Disaster Phase:

Construction material manufacturing companies

1. The construction companies should provide construction materials as part of their relief and reconstruction support to the affected households.

2. The construction industry should play a crucial role in recovery and reconstruction efforts in the disaster affected areas to improve upon infrastructure that can withstand future storms and disasters creating long-term economic benefits.

Construction Material Suppliers and Vendors

1. The material suppliers and vendors operating in the affected area can supply some essential materials like bamboo, timbers, bricks, roofing materials and fittings on a short-term credit basis to the most vulnerable households affected by a disaster.
2. The materials available with them should be supplied to the affected households for repairing and retrofitting of the damaged houses on the prevailing rates.

Bankers, MFIs and Lending Institutions

It is expected from the banks, MFIs and the lending institutions to relax the repayments of housing loans and make them flexible for a few months post-disaster taking into consideration of the devastating impact of the disaster. If required, the banks and MFIs should also come forward to top up the loans with additional help. For example housing loans for the repair of the damaged houses and infrastructures to enhance resilience and create scope for livelihood activities after proper retrofitting.

Workforce Associations: (Association of Labours and Masons)

1. The workforce associations should immediately prioritise the repair and retrofitting of the damaged houses over new constructions to provide instant shelter to the homeless people impacted by the disaster.
2. They should create more supporting hands by providing on-site trainings to the proactive labour force and fasten the process of repair, retrofitting and reconstruction post-disasters.

Role of Representatives from Local Governance (3 tier Panchayati Raj Institutions (PRIs)

Pre-disaster Phase:

1. The PRI members need to prepare the Gram Panchayat Level disaster preparedness plans with focus to protect the existing houses and infrastructures. The preparedness plan should consider the capacity building of the community members including the labour force on disaster resilient construction techniques, retrofitting of the weak houses incorporating resilient features of construction, protecting the houses and infrastructures from devastating impacts of disasters, upgrading the vulnerable shelters etc.

2. The PRI members should consider dovetailing different government schemes and projects of non-government organizations for implementing the plans to reduce loss to the houses and infrastructures in their Gram Panchayats.
3. The PRI members are crucial for selection of beneficiaries under various government housing schemes. They should prioritise appropriate vulnerable households based on the eligibility criteria mentioned under the schemes.
4. They should provide necessary socio-technical assistance and/or ensure that the beneficiaries have access to the assistance that will help in constructing disaster resilient permanent houses.
5. Coordinate with different line departments to collaborate and provide additional supports provisioned for eligible housing beneficiaries under various schemes.
6. Support the housing beneficiaries in linking to financial institutions for additional funds if required to complete the house with necessary disaster resilient features.

The role of panchayats and local bodies needs to be highlighted for enhnaced local coordination. The local bodies have to be actively involved in facilitating and improving coordination at grassroots.

During Disaster:

1. After receiving the disaster warning, the CBOs and village leaders should verify the weak structures and immediately try to mobilize community.
2. Advise the house owners for pruning the weak branches of big trees near to their houses those may fall on the house or infrastructures and damage.
3. Identify appropriate shelter facilities for the evacuees as per socially accepted norms.
4. Ensure that each of the shelter identified for accommodating evacuees should have all required facilities relating to food, drinking water, WASH, safety, security and health concerns.
5. Maintain discipline and calmness inside the shelters.

Post Disaster Phase:

1. PRI members to assess the impact of the disasters on the shelters and ensure eligible affected households should receive house damage compensation and enlisted for the housing schemes.
2. Monitor and supervise the repair and reconstruction activities to ensure disaster resilient construction.
3. Mobilize additional special funds from various sources for disaster resilient constructions in the GP.

Role of Community Leaders and their Organisations (VDMCs, Local Community Structures SDAs, SHGs, VDCs)

Pre-disaster Phase:

1. The village level CBOs and leaders should prepare the village disaster risk management plan to support the PRI members with focus to protect the existing houses and infrastructures. The preparedness plan should consider the capacity building of the community members including the labour force on disaster resilient construction techniques and retrofitting incorporating resilient features of construction.
2. The village leaders and CBOs should list out and select eligible beneficiaries under various government housing schemes following the eligibility criteria mentioned under the schemes.
3. They should provide necessary socio-technical assistance and or encourage the beneficiaries to access the assistance that will help in constructing disaster resilient permanent houses.
4. Coordinate with PRI members to collaborate and provide additional supports provisioned for eligible housing beneficiaries under various schemes.
5. Provide necessary financial support to the housing beneficiaries or facilitate linkage with different financial institutions for additional fund requirements to complete the house with necessary disaster resilient features.

During Disaster:

1. After receiving the disaster warning, the CBOs and village leaders should verify the weak structures and immediately try to mobilize community.
2. Mobilizse the house owners for pruning the weak branches of big trees near to their houses those may fall on the house or infrastructures and damage.
3. Ensure appropriate shelter facilities and evacuation routes for the villagers keeping the scenario and advise of the government in view.
4. Maintain discipline and calmness inside the shelters and provide appropriate psycho-social support to the villagers.

Post Disaster Phase:

1. Support the PRI members in assess the damage condition due to disaster impact on the shelters and ensure eligible affected households should receive house damage compensation and enlisted for the government housing schemes.
2. Support the affected house owners in immediate repair of their houses as applicable and facilitate to process to mobilize resources from government, non- government and other sources for reconstruction activities to ensure disaster resilient transitional or permanent construction.

3. During peace times, religious leaders may include DRR principles in their sermons.

Role of House Owners

Pre-disaster Phase:

1. The house owners should retrofit their existing houses with appropriate disaster resilient construction techniques for better resilience.
2. The house owners should try to construct permanent houses using disaster resilient features and quality materials to ensure less damage due to disasters.
3. They should ensure pruning of big tree- branches those are likely to fall on their houses and can cause damage during disasters.
4. The government housing scheme beneficiaries should construct resilient permanent houses using disaster resilient construction features and quality materials.
5. Consult representatives of government, NGOs and other relevant institutions on obtaining disaster resilient construction techniques to strengthen their houses.

During Disaster:

1. The house-owners after receiving the disaster warning message should strengthen their houses with additional ties as required and lock each door and window properly to protect it from the impact of disasters.
2. In case they find their houses are not safe enough to resist the disaster, they should evacuate to the safer shelters identified during planning and carry family survival kit and temporary shelter kit like; tarpaulin and rope etc.

Post Disaster Phase:

1. In case the house is damaged, the house- owners should try to clean their house- debris and make temporary shelter arrangements using the salvaged construction materials for staying of their family members as it may take longer time to reconstruct their house.
2. They should coordinate with the members of village committee, PRI and government for proper assessment of their damaged-house and listing in the house-damage compensation.
3. They should also vigilant during the process of selection of beneficiaries at the village and Gram Panchayat level under different government housing schemes to get enrolled and if left-out, should try to bring this issue to the knowledge of higher government officials for consideration.

Assessing and Monitoring the Sector Situation in India

ASSESSING AND MONITORING THE SECTOR SITUATION IN INDIA

Need for Assessment

Reconstruction of housing and communities following a disaster is a continuous process that begins immediately after the disaster, and often lasts for years. It is important to understand how affected populations and institutions will react after a disaster, and what roles and responsibilities stakeholders will take on during post-disaster reconstruction process, so that institutions and affected populations can work in a coordinated and complementary way to accomplish the desired outcomes.

Assessments help to establish the extent of post-disaster damage, loss, and needs, and they come in many forms: rapid, detailed, multi-sectoral, and sector specific. In housing and community reconstruction, a house-to-house assessment of housing damage should always be done. An assessment of the housing sector has to be done for shelter interventions. Some of the assessments methodologies done by Habitat for Humanity are given below for reference.

Guiding Principles for Assessing Damage and Setting Reconstruction Policy

- For early, rapid assessments, timely presentation of assessment data takes precedence over exhaustive analytical precision. However, rapid assessments are generally followed by more detailed, sector-specific assessments.
- Joint (multi-donor) assessments and standardized assessment methodologies produce benefits in terms of efficiency, quality, and common understanding of the disaster situation.
- Data collected during assessments—whether multi-sectoral or sector-specific—should be shared, if possible, to reduce duplication of efforts.
- Consultation with affected communities is essential and is possible even in rapid onset emergencies. Affected communities may want to conduct their own assessments.
- A detailed housing condition assessment is always necessary to estimate the total cost of reconstruction and to allocate the resources.
- Assessment should focus not just on bricks and mortar but should take into account the social condition of the people, their working ethos, their willingness to participate, and cultural values, as all these affect reconstruction.

- The particular needs of different groups and individuals (e.g., men, women, elderly, and children) should be evaluated during assessments. Marginalized and vulnerable populations must be sought out and their needs and interests incorporated into reconstruction policy.
- The reconstruction policy is pivotal because it establishes the expectations of the affected community and provides the framework for intervention by local and international actors.
- Communicating the reconstruction policy effectively to those affected by it is almost as important as defining it well. The added value of communication is highest when included from the beginning.

The principal trade off in conducting a rapid assessment is timeliness versus accuracy and completeness. Early data will be more subject to revision over time but having early information on damage and needs and estimates of reconstruction costs facilitates the initial appeals and response. **(5 Source: World Bank Handbook, Page No. 23).**

As highlighted above, coordination for conducting assessments between NGOs and other agencies as well as the affected groups and individuals cannot be over emphasized. In the last decade or so, experience, knowledge and technical expertise have come together to provide better holistic solutions with scientifically designed tools, so that the time taken by affected communities to regain their normal lives can be reduced. Today, disaster preparedness has taken a place of importance in the DRRR dialogue. As a result,NGOs and Government agencies are undertaking risk assessments which are very helpful for better preparedness. It gives households and communities the needed resilience to mitigate the loss caused by the disaster and recover faster to normalcy.

Risk Assessment

Risk assessment has become the bottom line for dealing with hazards and vulnerabilities, if and when they precipitate into a disaster and make communities resilient to the after-effect of a disaster. UNDP* has a comprehensive risk assessment methodology consisting of the following steps:

Step 1:

Understanding of current situation, needs and gaps to assess what already exists, avoid duplication of efforts, and build on existing information and capacities. This is done through a systematic **inventory and evaluation of existing risk assessment** studies, available data and information, and current institutional framework and capabilities.

Step 2:

Conduct **hazard assessment** to identify the nature, location, intensity and likelihood of major hazardeous conitions prevailing in a community or society.

Step 3:

Conduct **exposure assessment** to identify population and assets at risk and delineate disaster prone areas .

Step 4:

Conduct **vulnerability analysis** to determine the capacity (or lack of it) of elements at risk to withstand the given hazardeous scenarios.

Step 5:

Conduct **loss/impact analysis** to estimate potential losses of exposed population, property, services, livelihoods and environment, and assess their potential impacts on society.

Step 6:

Conduct **risk profiling and evaluation** to identify cost- effective risk reduction options in terms of the socio-economic concerns of a society and its capacity for risk reduction.

Step 7:

Formulation or revision of DRR strategies and action plans that include setting priorities, allocating resources (financial or human) and initiating DRR programmes. **(Source: Disaster Risk Assessment - Bureau for Crisis Prevention & Recovery; UNDP - October 2010)**.

Pre-disaster/Disaster Preparedness Assessment

In view of the Community-based disaster preparedness that is increasingly becoming a part of disaster response, taken measures must have a baseline of the statistics from the most recent population census in which household survey and poverty assessments are done. Steps 1 – 4 above, can be accessed from assessments done by Govt. agencies like NDMA and its counterparts at the state and district levels. These can be further localised based on the area identified by the NGO for intervention.

Secondly, baseline survey conducted in the areas identified for work must be maintained as a record to understand what housing and sanitation facilities existed prior to the occurrence of a disaster. This survey will cover aspects such as: details of house owner, details and status of house, water and sanitation facility in the house, and demographic profile of the household/family members.

(Annx. 1: Baseline survey (pre- disaster)- Household Profile)

Post Disaster Assessment of Shelter Situation

It deals with the long-term shelter intervention plan that ensures sustainable development of the communities affected by disasters. As mentioned in the section of Guiding Principles, the need for sensitivity on the part of the responders from different agencies is not to further distress a community fatigued by the disaster, and to avoid duplication of data compiled, as agreed upon for unified collection of details for post disaster need assessment.

Relief Phase:

The Rapid Assessment Template takes care of collecting details in the immediate period when relief work is undertaken. It gives an idea into what needs to be done in the relief phase for a safe shelter.

Provision of Emergency Shelter Kits

An Emergency Shelter Kit (ESK) contains tools that will help people repair or convert given materials into physical structures to live in a safer place and to have privacy till durable housing solutions are derived. This immediate shelter assistance will help families to instil confidence to negotiate for permanent shelters.

(Annx. 2: DR3 Disaster Rapid Assessment Template)

Recovery Phase:

Emergency Shelter

- List out the shelter requirements – what kind of materials, design can be used in the constructions during emergencies.
- Identify the available place for putting of Emergency shelters.
- Identify key organizations contact details and their roles and responsibilities.
- Train the Shelter task force with shelter operation and management.

If the permanent housing solutions and other basic services cannot be established in a feasible time, the option is to build Transitional/Interim Housing.

- List out the shelter requirements- what kind of materials/design can be used.
- Identify the available place for putting of transitional shelters – (negotiate with the Government or private land owners on the period of stay).
- List the materials/technologies that are available in the community (Always good to use the locally available materials / human resources / culturally and environmentally friendly materials.
- Train the shelter task force with shelter operation and management.

Rehabilitation Phase:

Community-Based Approach to Shelter Reconstruction

Community participation is seen as the way to engage with affected communities as it puts them at the heart of the humanitarian and rebuilding efforts of Government

and other agencies. Reconstruction of houses is the tangible expression of lives rebuilt. The following approaches give dignity to households as they build their own houses.

Approaches of Reconstruction

- **Cash Approach:** Unconditional financial assistance is given without technical support.
- **Owner-Driven Reconstruction:** Conditional financial assistance is given, accompanied by regulations and technical support aimed at ensuring that houses are built back better.
- **Community-Driven Reconstruction:** Financial and/or material assistance is channeled through community organizations that are actively involved in decision making and in managing reconstruction.
- **Agency-Driven Reconstruction (in-Situ):** Refers to an approach in which a governmental or non governmental agency hires a construction company to replace damaged houses.
- **Agency-Driven Reconstruction in Relocated Site:** Refers to an approach in which a governmental or non governmental agency hires a construction company to build new houses in a new site.

Permanent Housing

- Encourage community to participate in the construction planning, implementation (site selection in the case of relocation).
- Demand for positioning the community to close proximity to employment, healthcare and education.
- Train the shelter task force with shelter operation and management.

House Repairs

Repair and renovate the partially damaged houses and make it safe and fit for dwelling till durable housing solutions are derived. The affected people can regain confidence and rebuild their life with dignity.

Reconstruction of Houses

Construct permanent houses (Disaster Resistant) for those families who have lost their houses. HFH India will follow the local building codes / standards and keep all the needed records for verification/ tests. Habitat will work with the Corporates, Institutions and Foundations for raising the needed resources and volunteer support.

Construction of Sanitation Facilities

During a disaster, pollution is very common. The air and water both get polluted. They carry a lot of bacteria and viruses which are the main source of diseases. Pollution is at maximum when the people have failed to use healthy sanitation in

their area. Priority is given to sanitation during this period in order to keep the people healthy. It involves installing e-toilets, usage of proper cleansing materials, usage of sanitary pads, proper disposal of waste, etc.

Sanitation facilities play a very important role post the disaster as well. The main actionable involve construction of toilets in schools and community centres, creating awareness about healthy environment and sanitation by campaigns, training people about the practices involved in the process and the benefits from it along with the ill effects if not practiced, especially during a disaster. This will enable the people to get accustomed to the practices which will reduce the risk and impact of any health disaster that follows.

- On the Shelter Continuum, the pre-crisis, crisis, relief and development stages come to an end with the conclusion of the reconstruction in a location selected for DRRR. It will have Disaster Resilient Communities and Construction Practices through Disaster Risk Reduction Initiatives.
- Special measures should be taken to make shelter sanitized and infection resistant.
- Shelter construction with NGO intervention.

In bringing about the above, the last two phases of the Shelter Continuum's development stage are the important subject matter in this chapter. This section covers the intervention of NGOs in enabling households to build houses and other constructions related to shelter.

Stages to be considered: Planning and design; project development and implementation; monitoring and evaluation.

Continuum of the entire assessment exercise lies in creation of interventions that address the need for housing and sanitation for individuals and communities and help restore normalcy in their lives. At this point, designing of a project to fulfill that need is worked upon along with a sequence of activities that help to implement a housing and sanitation intervention.

Post Disaster: Programme Activities

A planned intervention can have the following project cycle.

Project Designing

Determine the quality and quantum of response through shelter based on the assessment done for:

a. Transitional / Interim Housing
b. Permanent Housing
c. House Repairs
d. Reconstruction of Houses

Construction for Maintaining Hygiene

Analysis and Interpretation of Post Disaster Needs Assessment (PDNA) with respect to shelter and housing including construction for maintaining hygiene in various forms as per the feasibility-IHHLs / Community sanitation units, school toilets. The PDNA report is used for designing the project. A complete report is compiled for justification of the project.

Participation of the affected community is mandatorily included in the planning and construction of houses and other community structures and spaces.

Community Participation

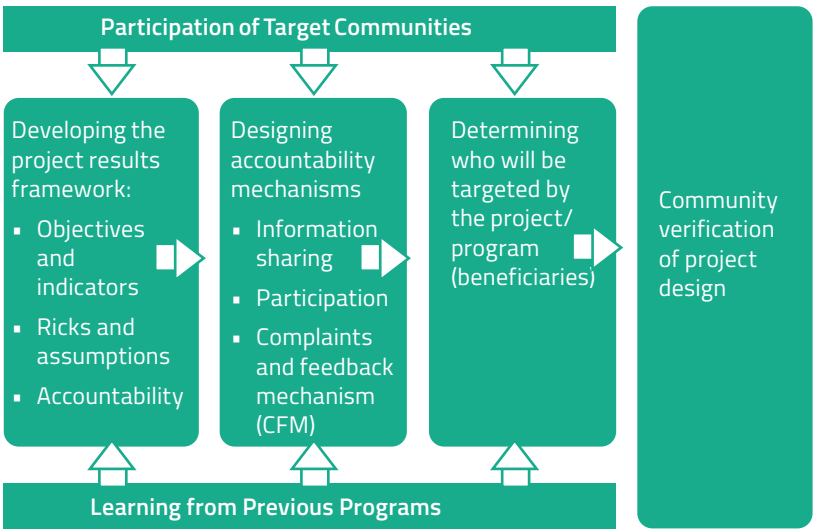
Community participation is determining project results, accountability mechanisms, who the project beneficiaries will be, by including and ensuring beneficiary and community satisfaction as shown below. Training must be imparted to-

- increase community understanding on Shelter intervention in their area and their participation the intervention in a particular period,
- discuss and decide on inclusion of Scientific/ Engineering principles in house construction .
- disseminate information on Government participation in the reconstruction of houses.

Involvement of the community members of households must take care of the following:

- Plan of the proposed house incorporating appropriate disaster resilience features.
- Utilization of locally available materials and follow cost reduction methods.

Figure 1: Role of Community Participation in Project Cycle



Example: Odisha Case Study - Active Role of Community in Evacuation Operations

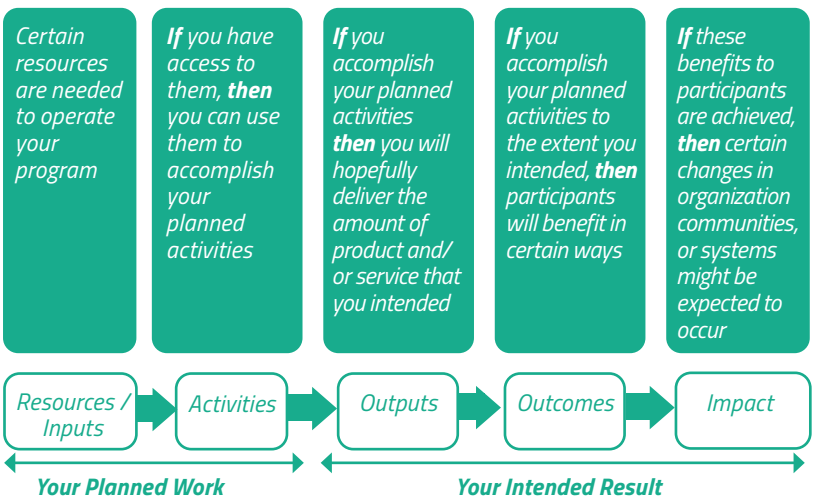
Disaster preparedness at the community level is conducive for speedy dissemination of alerts and mobilization of the people necessary for effective implementation of evacuation operations-one of the primary reasons behind Odisha's success in disaster management. As the World Bank puts it, Odisha has a good community outreach system through which people can be contacted on time. There is a network of 450 cyclone shelters and each shelter has a maintenance committee trained in rescue and relief activities. Through a network of these shelters and committees, the state has involved the entire community making it easy to disseminate warnings and evacuate people.

Recent disasters bear testimony to Odisha's prowess in conducting evacuation operations. During Cyclone Amphan, one of the strongest cyclones ever to have been recorded in the Bay of Bengal, nearly 200, 000 people were evacuated in the state. Cyclone preparations began as soon as the alerts were issued by the Indian Meteorological Department and restoration efforts were undertaken on a war footing so that by the time the cyclone steered away from Odisha towards West Bengal more than 85 percent of the power restoration work was already done. Heading the central team to assess the post Amphan damage in Odisha, Joint Secretary of Union Home Ministry, Shri Prakash, stated that "community involvement" in the process of disaster management had been one of the "achievements of the Odisha government.

Project Designing

Determining input activities output outcome and impact for accountability to the non- beneficiary stakeholders like donors and partners.

Figure 2 :Project Designing



Log Frame

With the work planned and intended results articulated, planning for implementation of the project can be taken up. A log frame to articulate the indicators for each of the segments is created.

Table 1: Log Frame Sample

Results - Hierarchy/ Chain	Objectively Verifiable Indicators (Ovi)	Data Sources/ Reporting Mechanisms	Assumptions
1. IMPACT (GOAL) The higher-level objective towards which the project is expected to contribute.	Indicator measures (direct or indirect) to verify the extent the impact is fulfilled.	Data sources as evidence of progress/ achievement project targets/ reporting mechanisms.	Events, situations, conditions necessary to sustain the impact.
2. OUTCOME (PURPOSE) The effect which is expected to be achieved as the result of the project.	Indicator measures (direct or indirect) to verify the extent the outcome is fulfilled.	Data sources as evidence of progress/ achievement project targets/ reporting mechanisms.	Important events, conditions or decisions necessary outside the control of the project management which must prevail for the development impact to be attained.
3. OUTPUTS The results that the project management should be able to guarantee.	Indicator measures (direct or indirect) to verify the extent the outputs are produced.	Data sources as evidence of progress/ achievement project targets/reporting mechanisms.	Important events, conditions or decisions necessary outside the control of the project necessary for the achievement of the outcome.
4. ACTIVITIES The activities that have to be undertaken by the project in order to produce the outputs.	Input goods and services necessary to undertake the activities.	Data sources as evidence of inputs/ activities made available/undertaken /reporting mechanisms.	Important events, conditions or decisions necessary outside the control of the project necessary for the production of outputs.

Project Deliverables Milestones

From a project implementation point of view, major milestones for housing could include:

1. Feasible and technical assessments.
2. Designing as per the requirement of the beneficiary and the region.
3. Ground-breaking ceremony.
4. Construction completion.

5. Delivery of the behaviour change communication sessions.
6. Apply mechanism to check if standards are met across disaster management cycle- Include key indicators for rehab phase.

Detailing of Project Implementation

Table 2: Checklist for Programmatic Monitoring of Project

Timeline	Milestones	Description of the Activities	Status of the Activities	Variance	Revised Plan
1st Quarter - March – May 2019	MoU Signed - Project Started and Construction work Started	MoU signed with the partner			
		Base Line Survey completed			
		Contractors selected			
		Procurement of Materials			
		Planning			
		Permission obtained from the local bodies			
2nd Quarter					
3rd Quarter					
4th Quarter					

Technical Monitoring: A Detailed Construction Plan (macro and micro)

Since the intervention involves construction activities, technical monitoring is done with the help of a Gantt chart.

Types of Monitoring

Table 3: Types of Monitoring

Reporting & Analysis	Validation	Participation
▪ Progress and/or quarterly reports ▪ Work plan, donors report	▪ Field visits ▪ Spot-check, visits, external assessments, joint monitoring ▪ Clients survey, researches and studies	▪ Outcome assessment, steer ing committees/ board meetings ▪ Stakeholder review meetings focus group meetings

Evaluation Learning

When the input and output aspects have been completed, monitoring of a project ends. As per the log frame created at the proposal writing stage, in order to assess the outcome and impact of the project on the stakeholders, the evaluation and learning aspects are taken up to identify strengths and weaknesses of the response and the lessons that can be applied for interventions in the future. Evaluation provides information on:

- **Strategy:** are the right things being done?
    1. Rationale or justification
    2. Clear Theory of Change
- **Operations:** are things being done right?
    3. Effectiveness in achieving the expected outcomes
    4. Efficiency in optimizing resources
    5. Client satisfaction
- **Learning:** are there better ways?
    1. Alternatives
    2. Best practices
    3. Lessons learned

Methodology for Evaluation

Evaluation of a project has a team of persons from different streams of expertise or from different departments to look at the project implementation from different angles and to give a diversified perspective on the way the project has been delivered. It involves gathering data at the commencement of the evaluation from sources such as proposals, planning documents, reports and their analysis to look for problems were faced, and the solutions arrived at. What was done well is also studied to have a holistic perspective. Quantitative data is also collected.

The stakeholders of the project are obvious contributors to the exercise and their input in terms of feedback, on all aspects of the implementation are gathered and an analysis is done to measure the satisfaction of the stakeholders, which is crucial for the success of the project. SWOT analysis can also be used to examine Strengths and Weaknesses which would contribute to the best practices applied during the course of the implementation. Opportunities and challenges would give the lessons learned for use, while implementing new projects.

Use of PRA tools and with focus group discussions, team meetings, interviews, field visits by including the stakeholders from the community and the implementing partners (if any), is recommended. Review of documents and data, triangulating

them for conformity and arriving at conclusions based on the same, is a must. The team assesses the quality of implementation. This is done by measuring the extent to which the objectives of the project have been achieved. The qualitative information and quantitative data help to tie up all aspects as per the terms of reference of the evaluation.

Thus, depending on the resources (both human and financial), size and coverage area of the project, as also the extent / depth to which the project has to be studied, evaluations can be tailor- made to suit the terms of reference. It is hoped that future evaluations will measure the efficiency and effectiveness of projects for DRRR - disaster reduction, response and rehabilitation - will help communities and households to go up the Curve in the Shelter Continuum.

Guiding Principles and Standards

GUIDING PRINCIPLES AND STANDARDS

In post disaster housing reconstruction, in all phases, be it relief shelters, interim shelter or permanent shelter, the past experiences and learning have provided certain guiding principles. The principles have emerged from the practices of diverse geographies, social and cultural contexts and ecology and guide in designing and implementing shelter programs.

Along with standard principles an owner driven approach should also be considered in context to shelter sector response, otherwise it may not respond to need of victims. In this approach the disaster victims reconstruct their houses by themselves. The role of the external agencies is limited to the provision of financial and technical assistance.

'Owner driven' programmes ideally build upon analysis of the pre-disaster local housing sector and strengthening housing production capacity. Understanding pre-crisis socio-economic structures can help identify who is already ill- served and likely to have difficulties in recovery.

Centrality of the Community and the House Owners

Shelter reconstruction is not a product to be delivered to a community. It is a process where the community and the house owners, make efforts to rise from the devastation and destruction and builds their homes and habitat with pride and care. If observed carefully, people start reconstruction soon after the disaster without wasting any time using the debris and salvaged materials. No external intervention shall undermine the community process, however overwhelmed they might be. If collective community energies are not recognised and respected, houses might get built but people continue to remain dependent and unsatisfied for generations. Local community capacities when trusted and strengthened, house owners feel empowered. The participation of communities and house owners for habitat development is a critical factor.

In the name of participation, often the external implementing agencies take control of the choice of the design, technology, material, including the cost and ask the community to make peripheral contribution such as labour for digging the foundation, curing the construction, loading and unloading the materials or cash contribution. The house owners need to be supported to develop their own plan and estimate as they usually do when they construct their houses in normal times. Often, people's participation is short circuited on the ground of speed and quality of reconstruction. External agencies must learn to move with the speed of the community.

Inclusive and Empowering Participation

In the housing construction conventionally women, elderly and persons with disabilities are often not consulted or engaged. It is not that women are to be involved only for the design of the kitchen or persons with disability for the ramps. It has been observed that when such people are consulted at every stage of the reconstruction - the designing, layout, choice of material, the nature of actual construction changes in a significant way making the houses more functional and barrier free. There are practical considerations in involving people, particularly women as the house owners, both women and men have different use of the house – house as a place of living, place of home based work, place to store the harvest, use it for rearing cattle, poultry and fishery, etc. The house owners know best how their house has to be designed, which technology and material to be used for the wall, roof and other elements and the related financing. No external agency can ensure a habitat as best as the house owner can visualise.

Engagement of Local Governing Institutions

The involvement of Panchayati Raj Institutions (PRIs) and urban local bodies are critical to develop regulative and facilitating institutional mechanisms on housing. On the area of regulative mechanisms, housing by laws, the safety norms need to be developed in participation with the community. These regulative mechanisms shall be applicable for the post disaster housing reconstruction, housing extension and new construction in normal times. It will build institutional mechanism in promoting a culture of housing safety.

The PRIs and local bodies can make homestead plots available for landless households, ensure implementation of safe social housing, and involve engineers to support house owners to prepare design, layout, estimate and implementation plans. Local governing institutions can also develop local material bank and a roaster of trained masons which can be accessed by the house owners for reconstruction. They can also facilitate with financial institution to provide priority sector lending to low- income groups. Along with the housing, the local government can support for habitat development by investing on community resources like link road, supply of water and electricity, management of drainage and solid waste.

Coordination

Convergence with Various Public Social Housing Schemes

Appropriate convergence of post disaster housing with the existing social sector housing schemes can contribute to the Sendai Framework priority of 'Build Back Better'. After Koshi floods in Bihar the government linked the housing reconstruction with the then IAY housing scheme to enable them to reach out to a larger number of affected people. Similarly, Govt. of Odisha developed a special

housing scheme for cyclone. The PM housing rental scheme to be implemented by PPP can also be targeted to cover affected people who have been staying on rent. Similarly, the involvement of the private sector can be thought out for resource pooling and development of low cost housing. Various stakeholders can work together for development of appropriate technology, clean informal energy, recycle of waste material, etc.

Environmental and Financial Sustainability

In various post disaster re-construction it has been observed that to maintain speed in providing relief to human tragedy, shelter materials are quickly procured that are not appropriate to local living condition. For example, tents and pre-fabricated materials are quickly brought to the site of the disaster. As people are not familiar with those housing materials, soon, these materials are discarded which turned into disaster waste material. Large amount of precious emergency reconstruction resources gets pumped into the market for procurement making relatively low contribution to improve the living conditions. In opposition to it, when people are enabled to use their salvaged materials and supported in re-constructing their own in-situ temporary and permanent houses, it is not only financially and ecologically sustainable, but changes their self- perception from a victim to active resilient house owner. It also contributes towards recovery from various stresses and trauma.

It is also often believed that a cement concrete house is the aspirational material. This concept needed to be checked. The cement concrete material brings other issues of size, cost, utility, extension, repair and many other issues. Effort should be made to choose materials that have low carbon foot prints. The re-construction process shall make minimum damage to the ecosystem – like a strict no to cutting of tree cover, levelling the hilly slopes causing soil erosion, etc.

Along with the housing program, ecological restoration must be added through tree plantation using local varieties, water harvesting, developing pasture land around the habitation, etc. The reconstruction process has to be designed in such a manner that along with environmental sustainability, it must strengthen/ revitalise the local economy by using local material and local masons and artisans. These issues need to be thoroughly discussed with the community and they must arrive at an informed decision. As it is often said, common people do not live in the house, they live around the house. A core house with functional surrounding can be possible only, when the material and technology are familiar and within the reach of the house owner.

Housing as an Entitlement

Under the guiding principles in the National Guidelines on Temporary Shelters for Disaster "affected Families", NDMA, New Delhi, 2019 it is stated that affected people are entitled to non- discriminatory, equitable, inclusive and respectful access to support from the state and other public agencies…. This makes all the

external organizations facilitating and supporting the re-construction accountable to the people and community. The interventions shall not view people as passive recipients or beneficiaries. As mentioned earlier, people need to be involved in all stages of reconstruction in decisive manner. The universal principle of 'no one shall be left behind' must be followed. Ideally, the re-construction of most vulnerable people, the old, single women, persons with disability, dalits, tribal, minorities must start at the beginning with community engagement. If the housing entitlement of the last person in the community is honoured at the beginning, it is a step towards ensuring social inclusion.

Framework for a Rural Habitat Policy, Development Alternatives, 2006, states that 'adequate shelter means more than a roof over one's head. It also means adequate space; physical accessibility; adequate security; security of tenure adequate basic infrastructure: water supply, sanitation suitable environment, quality and health-related factors; and an adequate accessible location with regard to work and basic facilities' all of which shall be available to all the entitlement holders.

Universal Adoption Housing Safety

Disaster safe housing is most essential and post disaster re-construction is a unique opportunity to improve resilience and reduce risks. Any constraint or barrier that people have in incorporating hazard resistant features due to lack of resources, knowledge or skills should be addressed. Most of the housing reconstruction is carried out by people themselves engaging local masons and building artisans. Disaster safe housing features are developed and weighted by engineers and administrators.

Many a times, the way the housing safe technology is articulated and explained it is not commonly understood. When people build their houses, they often fail to adopt those technologies in the prescribed manner leading to rejection of their claim over the entitled amount. The government and the external facilitating agencies shall make arrangements so that no house is built with violation of safety standards. Every year a large number of houses are being built as part of housing reconstruction. It is the duty of the government and the external facilitating agencies to train masons, provide on the spot technical support so that no house owner fails to adopt safe housing technology or deprived of getting the construction approved by the regulating authority, reinvest to make corrections or lose out the due claim. The safe technology must also be developed for vernacular housing so that traditional housing stock is made resilient and safe. All social housing projects shall also adopt the safe housing construction.

Sector Strategy and Agenda

SECTOR STRATEGY AND AGENDA

Developing Sector Strategy

Objectives for Developing Sector Strategy

1. To meet the shelter needs of affected populations more effectively by strengthening leadership, coordination, and accountability in the humanitarian shelter sector.
2. It is responsible for coordinating the response to meet emergency needs (plastic sheeting, shelter kits, tents, cash, NFIs or other solutions) and longer-term needs (transitional shelter, building or reconstruction of houses, capacity building, and related matters).
3. Shelter sector committee would be responsible for the developing an overarching strategy to provide a harmonized, efficient site planning and settlement design working and effective humanitarian shelter response in close cooperation with other shelter sector groups.
4. It would work on developing capacity through training and e-learning, develop tools, and coordinate policy development to guide country-level shelter sector groups.
5. It is essential to ensure that appropriate approaches and technical solutions are defined based on good practices, needs, and capacities.

Expected Shelter Sector Outputs

1. Formulation of reference indicators and a methodology that promote the establishment of baseline data and assessments in emergencies to improve planning, monitoring and evaluation within the sector.
2. Guidelines formation and implementation on field. Guidelines targeted towards shelter sector teams (including coordinators, information managers, and assessment and database focal points) as well as other field practitioners either directly involved in shelter sector coordination activities or participating in the shelter mechanism with the shared objective of ensuring an effective and coordinated response.
3. Beforehand preparation and availability of trained technical staff to work efficiently during emergency response.

Steps in Developing Shelter Sector Strategy

1. Understanding 'shelter' and the 'shelter sector'.
2. Familiarize team with shelter and the shelter committee.
3. Analysis of resources, services, training and education.
4. Analysis of context and opportunities.
5. Identifying and defining priority areas of intervention.

Define Goals and Objectives

1. Identification of possible preparedness and response strategies.
2. Develop work plans for various agencies and key stakeholders.

Action in shelter sector is critical for both containing the virus and lowering its immediate impact and aftermath and this sector has a direct or indirect effect on all other sectors of the society.

Following action points need to be taken care as part of emergency response.

- The sector committee should focus on implementation and usage of standard construction codes and safety norms being implemented at both rural and urban level. Assistance through provision of technical staff even in remote areas needs to be undertaken along with spreading of awareness especially in view of COVID. During an infectious disease outbreak, services should meet minimum quality standards and should be separated for infected vs. non-infected patients. Support should ensure that services are not disrupted.
- Efficient and economic designs are required to be designed following hygiene, social distancing norms for practical implementation with reference to rural and urban settlements. Points of hand washing, water supply mechanism, sanitation installment, living and cooking area need to designed adequately with reference to location, type of material available, space available, economic factors, type of use, number of users, availability of resources and labor need to be taken under consideration before implementing strategies. Improving hand washing behavior, food hygiene, and safe water practices.

Resource Mobilization

RESOURCE MOBILIZATION

Introduction

As a part of the work plan of the sector committee, members would be undertaking joint programming and advocacy initiatives based on the pre-determined key priorities. Therefore, resource mobilization forms a key component of the sector committee to minimize avoidable mortality and morbidity.

'Flash Appeal'

Within 5 to 7 days of the onset of a crisis, the sector committee should convene and release a flash appeal to mobilize resources for humanitarian response during the first three to six months. After the first month, the sector committee should reconvene and revise the flash appeal to include additional information, and more details about early recovery projects.

Some basic principles

- The flash appeal should contain an initial response plan - developed jointly with participation of government agencies.
- The initial response plan should focus on life- saving needs and necessary early recovery projects, and include a response strategy, roles and responsibilities of stakeholders, and outline of proposed projects based on early estimates, JRNA report and other available information.
- While government agencies may not appeal for funds, they may acknowledge the need for resource mobilization through a statement in solidarity with civil society organizations.

Action Points to Develop Flash Appeal

- Bring together all significant stakeholders and analyse the available assessment information, discuss any projects proposed by member organizations, develop a consensual strategy to ensure that the appeal contains relevant, high- priority, coordinated and feasible projects.
- Consult with other Sectors, notably FNS and WASH to ensure complementarity of projects and avoid duplication.
- Consult with MOHFW, MWCD on the appeal, and keep donors informed of the process.

- Submit the draft within 5 days of the decision to launch the flash appeal to the Sphere India Secretariat, although the actual deadline may be specified during consultation meetings of the sector committee in each case.

Common Resource Pool for the Sector

The Common Resource Pool (CRP) is a stand-by fund established by the Sphere India Secretariat to enable response to help jump-start critical operations or support under-funded emergencies, intended to complement – and not substitute for – flash appeals. The funds are intended to support emergency response in general, and if any member organization wants to seek access to the fund, a proposal for the project funding is to be submitted to the Sector Committee and the Sphere India Executive Committee.

Action Points for CRP Funding:

- While releasing the flash appeal, donors should be appealed to contribute for the CRP.
- Donor support crucial for backing during all scales of disasters, not just the mega/ international disasters.
- Internally, the sector committee shall agree on the high-priority projects which are not attracting attention of donor agencies, and develop a Guiding Note for the Sphere India Executive Committee.
- The Sector Committee to invite organizations to submit proposal to the Sector Committee and the Executive Committee.
- The Executive Committee of Sphere India to select the projects to be funded based on the Guiding Note and the project proposal, and to ensure that the procedure to transfer the CRP funds is clear and understood.
- Clarify funding requirements, help set priorities and agree on cluster contributions to the HCs overall humanitarian funding proposals.

Financial Tracking System

Sphere India Secretariat shall develop a Financial Tracking System (FTS) dashboard to track needs and contributions against the health/shelter component of the flash appeals and funding from CRP. It shall provide quarterly reports on the FTS, analysing the crises-wise utilization of funding, and the additional funding required to fulfil the priority projects.

Resource Mobilization Strategy

The Sector Committee Lead, with support from the members, shall undertake efforts to increase the participation of donors in the sector committee meetings, visits to the projects undertaken through flash appeals and CRP, oversee communication to donor agencies on behalf of the sector committee, and link potential donors to the sector

committee and its members wherever appropriate. Similarly, the Sector Committee Lead, in consultation with the members shall prepare a Joint Report to be prepared for donors based on funding received from the flash appeal or CRP, including a joint narrative report and a separate financial report for each organization.

Benchmarks and Indicators

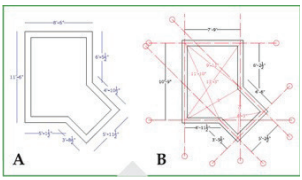
BENCHMARKS AND INDICATORS

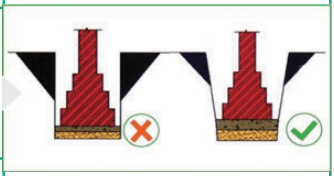
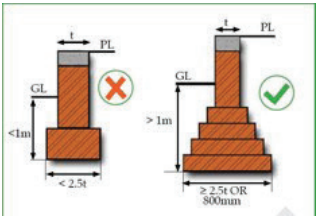
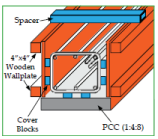
Indicators are crucial to provide evidence-based data to inform the decision-making by various stakeholders and to improve accountability. The use of indicators also allows data collection to be conducted in a systematic manner, in accordance with recognised standards. Indicators are also necessary to enable reliable and consistent reporting of quantifiable data that inform food security actions and measure output, outcome, and impact. Standardized indicators enable data reported to be comparable at various levels. Disaggregation of data will be especially helpful for determining which groups are most at risk and affected by a crisis.

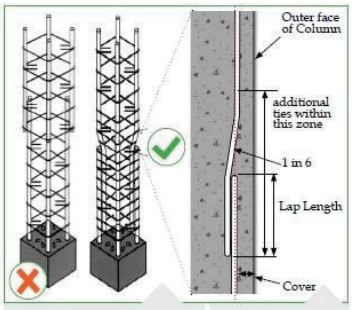
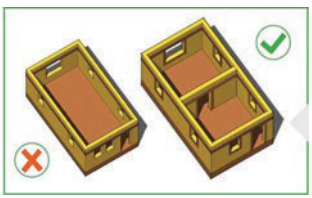
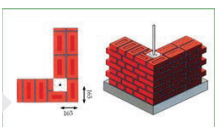
As appropriate, each indicator should be disaggregated by sex (male/ female), age, beneficiary category, pregnant and lactating women, people living with HIV, disability, traders, market actors, producers, activity, food assistance (fortified blended foods, ready to eat foods, special nutritional products), non- food item, agricultural item, urban/rural areas, head of household (female headed HH, child (male/female) headed HH [under 18], person with disability headed HH, elderly (male/female) headed HH [over 60]), religious, ethnic or political identities, community and household. The effectiveness of different indicators by different disaggregation can change with location and time; the factors by which data can be stratified should be selected based on the situation.

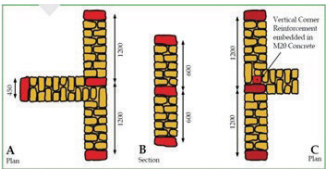
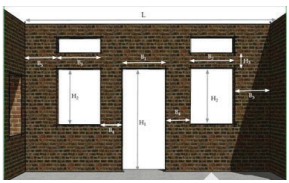
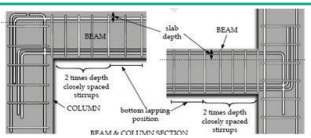
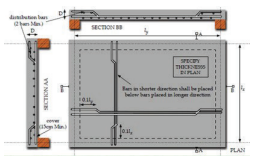
Application of indicators should be based on the type of disaster, vulnerabilities based on livelihood zones, seasonal calendars, food and nutritional status and household resilience, understanding hazard risks and current vulnerabilities and objectives of the assessment or monitoring. Alignment of these indicators with the indicators used nationally to track the situation will be useful- efforts should be made to harmonize the indicators for comparability at the global level as well.

Table 4: Indicators and Benchmarks

	Description	Do's	Don'ts	Guidance and Remarks
1.a	Site Selection	The site should be chosen on high enough ground, wherever possible, above the normal annual average flood level in the area.	Avoid low-lying areas.	 Permanent Benchmarks should be marked for all centre lines as shown in Figure-B

	Description	Do's	Don'ts	Guidance and Remarks
1.b	Soil Testing Setting out centre Line and markings	Conduct soil test by providing a trial pit and assess the type and the bearing capacity of soil.	Avoid assumptions in load- carrying capacity without assessing the sub-soil stratum.	
2	Foundation	Provide slightly slanting cut.	Avoid straight cut.	
		Sand compaction thickness more than 150mm (6").	Sand compaction less than 150 mm.	
		PCC in Mix 1:4:8 thickness more than 75 mm (3").	Avoid PCC less than 75 mm thick- ness.	
	Description	**Do's**	**Don'ts**	**Guidance and Remarks**
		Width of foundation should be 2.5 times the thickness of the wall or 0.8m, whichever is more. Minimum depth of foundation should be 1.0m.	Width of foundation should not be less than 2.5 times the thickness of wall. Never make a wall with- out or with foundation less than 1.0m.	
3	Basement (Plinth)	Minimum height of basement above natural ground level should be 600mm (preferably 750 mm) Alignment of the grade beam should be ensured in line and level.	Avoid basement height less than 600mm.	 

	Description	Do's	Don'ts	Guidance and Remarks
4	Beams/ Columns	*Minimum grade for concrete should be M20 (1:1.5:3) for volumetric proportioning. *Provide adequate lap length with a slope of 1:6 *Columns should have minimum 4 nos. of 12mm Dia. Bars. (preferably use TMT bars near coastal areas) *Follow the ductile detailing shown in the figure.	Avoid using mix M15 (1:2:4) and less, for concreting. Avoid insufficient lap length. Avoid using bars less than 12mm for columns.	
	Description	**Do's**	**Don'ts**	**Guidance and Remarks**
5	Walls	Average wall height should be 2700mm to 3000mm. Addition of a buttress wall (as shown in figure) reduces L/H ratio and increases the strength and stability.	Avoid walls that are too high and too long.	
6 .a	Brick Masonry	Joints in brick work should be staggered (not straight) Mortar 1:6 or less should be used.	Avoid straight joints in brickwork. Avoid brick work (in walls) without vertical rods.	 Vertical rods should be connected with plinth and lintel band. The bars should be located at 165mm from the outer face of the 230mm wall, protected with 40mm cover set in M20 concrete.

	Descrition	Do's	Don'ts	Guidance and Remarks
6.b	Stone masonry	Through stones should be placed horizontally at a spacing of 1200mm and vertically at a spacing of 600mm.	Stone masonry without bond stones /through stones will reduce the strength of the masonry walls.	
	Description	**Do's**	**Don'ts**	**Guidance and Remarks**
7	Openings	Horizontal distance between two openings should not be less than 50% of the height of shorter opening (and not less than 600mm).Openings to be located away from the corners by a clear distance equal to at least one fourth of the height of opening or 600mm,whichever is more.	Avoid door and window openings at corners which is less than 450mm. Avoid too many openings in the wall.	 The area of windows varies from 10% to 15% of floor area of building in hot and arid regions. Vertical distance from an opening to opening above, should not be less than 600mm and half the width of smaller opening.
8	Roof/ Floor beams	Extend beam rods into the columns as shown for better anchorage.		
	Description	**Do's**	**Don'ts**	**Guidance and Remarks**
9	Slabs			 Tow- way slab simply supported on brickwork without torsional steel.

	Description	Do's	Don'ts	Guidance and Remarks
10	Scaffolding / Form work	Columns should be secured properly from all directions before concreting to secure vertical alignment.	Avoid using brick work in walls as form work for columns.	
	Description	**DOS**	**DONTS**	**Guidance and Remarks**
11	Cover to reinforce-ment	Nominal cover to reinforcement for footing mat – 50mm Columns – 40mm Beams – 20mm Slab – 15mm *cover may also depend on the exposure conditions of the surface.		 The legs of the column vertical rods should be spread like shown in the above figure and reinforcement steel should not touch the earth sideways/ bottom.

Some Practical Field Tests for Bricks and Cement

Bricks:

- Colour should be reddish brown and uniform.
- Edges should be sharp, straight and at right angles perpendicular to faces.
- Water absorption of bricks should be less than 20 per cent by weight when soaked in water after 24 hours.
- Should not break when brick is dropped on their flat face, from a height of 60 cm.

Cement:

The date, month and year of manufacture of the bag indicates the freshness of the cement. When it is finger rubbed, its silky texture should be felt.

When hand is pushed in a cement bag, chillness should be felt. If found warm, indicates that the hydration has started and cement has aged.

Curing of Concrete/ Plaster:

Exposed surface of concrete or plaster should be kept continuously in a damp or wet condition by ponding or by covering with a layer of sacks, canvas, hessian or similar materials and kept constantly wet for at least seven days from the date of placing concrete in case of ordinary Portland Cement of 43 Grade. The period of curing shall not be less than 10 days for concrete exposed to dry and hot weather conditions.

Disaster Safety Issues in Housing Projects:

For ensuring safety and minimising disaster risk to housing projects which are subjected to earthquakes, cyclones, floods and landslides, acting mostly separately but sometimes in combination of two of them, the best approach will be to plan, design, construct and monitor the projects in accordance with the relevant BIS standard codes, guidelines and handbooks. A brief list of most applicable codes on guidelines for various disasters are given in table a.

Existing Building Codes:

For details on Existing Building Codes refer to annexure 1 table a. This will cover the issues of siting of the projects, soil properties and foundations, structural design of load-bearing masonry buildings, reinforced concrete frame buildings, steel frame buildings, wooden houses or bamboo huts and clay wall houses.

Post-construction – Technical Audit:

The table given below lists the areas from ranging design, sub-structure, super structure, materials used, including testing to assess the strength, parameters and the attached Proforma needs to be filled.

For details on Post-construction – Technical Audit refer to annexure 2 table a.

Humanitarian Accountability

Accountability is responsible use of power. Downward accountability means being accountable to communities, in a very direct and tangible way.

It requires agencies to

- Take account of beneficiaries' opinions, concerns, suggestions and complaints.
- Put in place systems to facilitate this to happen.
- Communities should have access to information and opportunities to voice their opinions.
- Agencies have the responsibility to respond to feedback.

How We Do It

For details on how we do it refer to annexure 3 table a.

Annexure

Annexure 1: Existing Building Codes

TABLE - A (APPLICABLE CODE ON GUIDELINES FOR VARIOUS HAZARDS)		
I. FOR GENERAL STRUCTURAL SAFETY		
SN	**CODE NO**	**DESCRIPTION**
1	BIS:2005	National building code of India
2	IS 456:2000	Code of practice for plain and reinforced concrete.
3	IS 800:2006	Code of practice for general construction in steel
4	IS 801:1975	Code of practice for use of cold formal light gauge steel structural members in general building construction
5	IS 875(Part 1) : 1987	Design loads (other than earthquake) for buildings and structures part -1 unit weights of materials
6	IS 875(Part 2) : 1987	Design loads (other than earthquake) for buildings and structures part -2 imposed loads
7	IS 875(Part 3) : 1987	Design loads (other than earthquake) for buildings and structures part -3 wind loads
8	IS 875(Part 4) : 1987	Design loads (other than earthquake) for buildings and structures part -4 snow loads
9	IS 875(Part 5) : 1987	Design loads (other than earthquake) for buildings and structures part -5 special loads and load combination
10	IS 883:1966	Code of practice for design of structural timber in building
11	IS 1904:1987	Code of practice for structural safety of buildings: foundation
12	IS 1905:1987	Code of practice for structural safety of buildings: masonry
13	IS 2911:1979(Part 1)	Code of practice for design and construction of pile foundation section 1; section 2 cast -in-situ piles; section 3 driven precast concrete piles ; section 4 precast concrete piles
14	IS 2911:1979(Part 2)	Timber piles
15	IS 2911:1979(Part 3)	Under reamed piles
16	IS 2911:1979(Part 4)	Load test on piles
FOR CYCLONE / WIND STORM PROTECTION		
17	IS 875(3) - 1987	Code of practice for design loads (other than earthquake) for buildings and structures, part 3, wind loads
18	IS 15498:2004	Improving cyclone resistance of low rise houses and other buildings

TABLE - A (APPLICABLE CODE ON GUIDELINES FOR VARIOUS HAZARDS)		
I. FOR GENERAL STRUCTURAL SAFETY:		
Sl No.	**Code NO**	**Description**
	BMTPC: 2010	Improving wind / cyclone resistance housing - guidelines
FOR EARTHQUAKE PROTECTION		
19	IS 1893-2002	Criteria for earthquake resistant design of structures (Fifth Revision)
20	IS 13920-1993	Ductile detailing of reinforced concrete structures subjected to seismic forces - code of practice
21	IS 4326 - 1993	Earthquake resistant design and construction of buildings - Code of practice (second revision)
22	IS 13828-1993	Improving earthquake resistance of low strength masonry buildings-guidelines
23	IS 13827 - 1993	Improving earthquake resistance of earthern buildings -guidelines
24	IS 13935 - 1993	Repair and seismic strengthening of buildings - guidelines
25	BMTPC:2010	Improving earthquake resistance of housing - guidelines
FOR PROTECTION OF LANDSLIDE HAZARD		
26	IS 14458(Part 1) :1998	Guidelines for retaining wall for hill area
27	Part 1	Selection of type of wall
28	Part 2	Design of retaining / breast walls
29	Part 3	Construction of dry stone walls
30	IS 14496: 1998	Guidelines for Preparation of landslide - hazard zonation maps in mountainous terrains
31	IS 14680: 1999	Guidelines for landslide control
32	IS 14804	Guidelines for siting, design and selection of materials for residential buildings in hilly areas
FOR PROTECTION OF FLOOD HAZARD		
33	BMTPC :2010	Improving flood resistance of housing - guidelines

Annexure 2: Technical Audit

TECHNICAL AUDIT PROFORMA		
Sl. No.	**Item Description**	**Comments**
1	BIS:2005	
1.1	Design / Drawings available?	Y/N
1.2	"Design Category Type Design ? Specific Design? If yes, design to be shown to technical auditor"	Y/N Y/N
1.3	Drawings prepared, checked by competent authority?	Y/N
1.4	"Design drawings / details Structural detail included Earthquake / Wind resistant features included?"	Y/N Y/N
1.5	Design verified / Vetted by Dept. / Govt approved agency / competent authority?	Y/N
1.6	Design changes approved by Dept. / Govt. approved agency / competent authority?	Y/N
2	FOUNDATION	
2.1	Foundation used	Existing / New
2.1.1	Depth of foundation below ground	<50 cm / 50 -70 cm / > 70 cm
2.1.2	Type of masonry	Stone / Bricks / PCC Blocks
2.1.3	Thickness of masonry (above ground)	23 cm / 35 cm / >35 cm
2.1.4	Mortar used	Cement - Sand / Lime / Mud
2.1.5	Mix of the mortar	1:4 / 1:6 / Leaner
2.1.6	Height of plinth	< 60 cm / > 60 cm
2.1.7	If stone masonry	LOAD TEST ON PILES
	Through stones	Y/N If yes, adequate / inadequate"
2	Corner stones	Y/N If yes, adequate / inadequate"
2.2	Reinforcement in Foundation	Y/ N/ NA
3	WALLING	
3.1	Type of Masonry	Stone / Bricks / PCC Blocks
3.2	Mortar used	Cement - Sand / Lime / Mud

TECHNICAL AUDIT PROFORMA		
Sl. No.	**Item Description**	**Comments**
3.3	Mix of cement mortar	1:4 / 1:6 / Leaner
3.4	Thickness of wall	>23 cm / 23 cm / < 23 cm
3.5	Joint properly filled	OK / NOT OK
3.6	If stone masonry	
	Through stones	Y/ N
3	Corner stones	Y/ N
3.7	Overall workmanship	Good / Medium / Poor
4	ROOFING	
4.1	Type of Roof	Flat / Sloping
4.2	If Sloped	Tiles / AC Sheet / CGI / Galvalume
4.3	Purlins	Angle - Iron / Timber / Other
4.4	Truss type	Steel / Timber / Other
4.5	Anchorage with wall	Adequate / Inadequate
5	MATERIALS	
5.1	Cement	
5.1.1	Type of cement	OPC / PPC / PSC
5.1.2	If OPC	Grade (33 / 43 / 53)
5.2	Sand	
5.2.1	Source	Quarry / Dealer
5.2.2	Type of sand	River sand / Stone dust / M-Sand
5.2.3	Presence of harmful / defectious materials	Mild / Moderate / High
5.3	Coarse aggregate	
5.3.1	Source	Quarry / Dealer
5.3.2	Type of coarse aggregate	Gravel / Crushed stone
5.3.3	Presence of harmful / defectious materials	Mild / Moderate / High
5.4	PCC blocks	
5.4.1	Source	On site making / Dealer
5.4.2	Type of PCC blocks	Solid blocks / Hollow blocks
5.4.3	Ratio of concrete in blocks	Mix
5.4..4	Interlocking feature	Y/ N

TECHNICAL AUDIT PROFORMA		
Sl. No.	**Item Description**	**Comments**
5.5	Brick blocks / hewn stone, etc.,	
5.5.1	Source	Quarry / Dealer
5.5.2	Strength (field assessment)	Low / Medium / High
5.5.3	Dimensional accuracy	Y / N
5.6	Concrete	
5.6.1	Mix of concrete	(1: 1 1/2 : 3) / (1:2:4) / Design Mix
5.6.2	Batching	Weigh Batching / Volume Batching
5.6.3	Compaction	Vibrators / Thappies and rods
5.6.4	Workability	Low / Medium / High
5.6.5	Availability of water	Sufficient / Insufficient
5.6.6	Curing	Satisfactory / Unsatisfactory
5.7	Reinforcing steel	
5.7.1	Type of steel	Plain Mild steel / HYSD bars
5.7.2	Source	Authorized dealer / market
5.7.3	Whether ISI marked	Yes / No
5.7.4	Condition of bars	Clean / Corroded / Cleaned
5.7.5	Fixing of reinforcement as per drawing	Y / N
5.7.6	Suitable cover	Y/ N
5.7.7	Spacing of bars	Regular / Irregular
5.7.8	Overlaps as per specifications	Y/ N
5.8	Form work	
5.8.1	Type of Form work	Timber / Plywood / Steel
5.8.2	Use of mould oil	Y / N
5.8.3	Leakage of cement slurry	Observed / Not observed
6	Seismic Resistance Features - masonry buildings	
6.1	Provision of adequate bands at	
6.1.1	Plinth level	Y / N
6.1.2	Sill level	Y/ N
6.1.3	Lintel level	Y/ N
6.1.4	Flat roof level (if applicable)	Y / N

TECHNICAL AUDIT PROFORMA		
Sl. No.	**Item Description**	**Comments**
6.1.5	If sloped roof	
	Gable wall top	Y/ N
	Eaves level	Y/ N
6.2	Provision of adequate vertical steel at	
6.2.1	Each corner	Y/ N
6.2.2	Each T- junction	Y / N
6.2.3	Each door jamb	Y / N
6.2.4	Around each window > 90 cm wide	Y / N
6.3	Openings	
6.3.1	Total width of openings ratio to wall length (percentage)	33 / 33 -42 / 42 - 50 / >50
6.3.2	Clearance from corner	OK / NOT OK
6.3.3	Pier width between two openings	OK / NOT OK
7	Seismic Resistance Features - RC Frames	
7.1	Ductile detailing	DONE / NOT DONE
7.2	Spacing of stirrups	OK / NOT OK
7.3	Sizes of members	OK / NOT OK
7.4	End Anchorage	OK / NOT OK
7.5	Lapping (length, location etc.,)	OK / NOT OK
7.6	Angle of stirrup hook	90 / 135 degrees
8	Testing carried out by owner / Engineer / Supervisor	
8.1	Water	Testing done Testing Results
8.2	Cement	Y / N OK / NOT OK
8.3	Bricks /PCC blocks / Stones	Y / N OK / NOT OK
8.4	Aggregate	Y / N OK / NOT OK
8.5	Mortar	Y / N OK / NOT OK
8.6	Concrete	Y/ N OK / NOT OK
8.7	Reinforcement in foundation	Y/ N OK / NOT OK

Annexure 3: Accountability to Communities in Shelter Interventions

ACCOUNTABILITY TO COMMUNITIES IN SHELTER INTERVENTIONS				
Key Areas	**Providing Information**	**Consulting With Communities**	**Promoting Participation**	**Collecting and acting on feedback and Complaints**
DEFINITION FOR THE ABOVE FOUR STANDARDS				
COMMUNITIES	We commit to ensuring that relevant program information is made available and intentionally provided to communities in a timely, accessible and an accurate manner.	We are committed to the principle of informed consent and ensuring that communities are aware of, understand and agree with key decisions relating to our intervention.	We are devoted to purposely empowering communities and building their capacity to participate in all components of the program cycle .	We undertake to implement community feedback and complaint procedures that are accessible, safe and effective. These procedures will sensitise communities on their rights .
HOW WE DO IT	"Explain the criteria for selection of beneficiaries for that articular shelter construction / repair intervention. In new construction /repair /renovation, share the plan, design, estimates (budget), explain the various features of the house through community meetings (or FGD). Educate beneficiaries / local communities on the various specifications, materials used, mix proportions and other key informations required for monitoring the shelter project. Inform community about engaging skilled / unskilled labour from communties or households for construction."	"Consult local communities / household and other key stakeholders in beneficiary selection for the shelter intervention. Consult with key stakeholders on various construction materials available locally so that local economy is revived. Consult with communities on the various options available for shelter intervention. Consult with communities on where and how to display the final approved list of beneficiaries. Consult with the communities on the preferred methods for providing suggestions and feedback."	"Ensure community participation in important key decision making and periodic review meetings. Ensure participation of households in the monitoring of construction. Empower households to provide inputs on the design, method of construction and suggest modifications required as per the individual's choice. Understand the local capacities and utilize the same in the shelter programs."	"Make communities aware that they have the right to provide suggestions / complain and feedback. Set up appropriate and accessible to all facilities for providing suggestions / feedbacks to the agency. Collect / review and respond to feedback and suggestions within a realistic time, acceptable by all. Be open to feedbacks' / comments' / suggestions and. Act on it, if the same is appropriate and suitable to the context."

A small exercise at field level, involving the community households may be conducted with smileys (different moods) to assess the state / level where the agency is and necessary action steps need to be identified and practiced at field for continuous improvement.

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Sphere India

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Sphere India Secretariat

B-94, B Block, Sector 44, Noida, Uttar Pradesh- 201303

info@sphereindia.org.in sphereindia.org.in

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