Chapter 8

Disaster Risk Management

Successive Finance Commissions have followed an expenditure-based approach to determine the allocation of funds for disaster management to State Governments. In a significant departure from the past, in our Report for the Year 2020-21, we had recommended a new methodology, which is a combination of capacity (as reflected through past expenditure), risk exposure (area and population) and hazard and vulnerability (disaster risk index) for determining State-wise allocation for disaster management. This shall be continued for the five-year award period from 2021-22 to 2025-26 also.

Similarly, we have recommended continuation of mitigation funds at both the Union and State levels – National Disaster Mitigation Fund (NDMF) and State Disaster Mitigation Funds – to aid the implementation of mitigation measures in States for the award period, as provided in the Disaster Management Act, 2005. The six types of earmarked allocations within the overall allocation of National Disaster Response Fund and NDMF shall also continue in order to address certain priorities related to preparedness, mitigation and recovery through special initiatives.

A set of ideas and innovations which promote market-based instruments of risk management and identify alternative sources of funding has also been presented.

8.1 Paragraph 9 of the Terms of Reference (ToR) mandates the Commission to "review the present arrangements on financing Disaster Management initiatives, with reference to the funds constituted under the Disaster Management Act, 2005 (53 of 2005), and make appropriate recommendations thereon". Further, Para 7 requires the Commission to "consider proposing measurable performance-based incentives for States, at the appropriate level of government, in following areas: … (iii) Achievements in implementation of flagship schemes of Government of India, disaster resilient infrastructure, sustainable development goals, and quality of expenditure". Subsequently, we were asked to submit two reports, one for the year 2020-21 and a final report for an extended period of 2021-22 to 2025-26. To this end, we had already made our recommendations in Chapter 6 of the Report for the Year 2020-21.

8.2 In this first report, we briefly outlined the current mechanism of disaster risk management. We also gave fifteen recommendations (i to xv) at para 6.4 of the chapter on Disaster Risk Management. These include setting up of mitigation funds, allocation of funds at national and state level, a new methodology to estimate the disaster risk management fund and the allocation of funds to various States to cover both mitigation and response. From the total earmarked grants for disaster management, both for the national and State corpus, 20 per cent was earmarked for mitigation and the remaining 80 per cent for the response fund. The response fund was further apportioned into three windows, namely Response and Relief, Recovery and Reconstruction and Capacity Building in the ratio of 50.0:37.5:12.5. Further, four priorities were identified under the National Disaster Mitigation Fund (NDMF) and two priorities under the National Disaster Response Fund (NDRF).

8.3 We reviewed these recommendations along with feedback from the Union and the State Governments. We also examined the context of the unprecedented Covid-19 pandemic within the current framework of disaster management in India. Recommendations for disaster risk management covering the period from 2021-22 to 2025-26 are made after considering all relevant issues.

Background

8.4 Disaster management, as a subject and as a facet of Union-State relations, has evolved over the years. Initially, the focus was largely on disaster relief. Earlier Finance Commissions too used the term 'disaster relief' while drafting their recommendations. However, the Disaster Management Act expanded the area of concern and action of both the Union and State Governments to a wide range of disaster management functions, which included relief and response, preparedness and mitigation, as well as recovery and reconstruction.

8.5 The Act also led to the creation of a new institutional structure for disaster management, with the setting up of the National Disaster Management Authority (NDMA) and State Disaster Management Authorities (SDMAs). The role of these institutions and the functions mandated by the Act have influenced the recommendations of Thirteenth and Fourteenth Finance Commissions (FC-XIII and FC-XIV). Successive Finance Commissions have taken a gradual and incremental approach to strengthening financial arrangements for disaster management. Based on their recommendations, a well-structured scheme of funds at the Union and State levels has been institutionalised, supported through guidelines and norms for assistance.

8.6 This scheme of funding for disasters has provided State Governments with a dependable source of assistance to meet their disaster response and relief needs. Further, these funds could be augmented and replenished through a national disaster fund when disasters of rare severity necessitate it. The guidelines and norms for assistance have been periodically revised, resulting in enhanced provisions for those affected by disasters.

8.7 A review of these arrangements every five years provides Finance Commissions an opportunity to introduce innovations in the funding arrangements as well as to improve the efficiency and equity of disaster management funds. The Finance Commissions are called upon to address a much broader task than allocating financial resources to States based on a set of considerations. This broader task is equally about reviewing the context of risk and vulnerability in the country, improving the institutional and policy aspects of disaster management, expanding its scope, and encouraging more stakeholders to participate in an area which has a direct bearing on the physical safety, security and well-being of the people.

8.8 Over the years, Finance Commissions, through their recommendations, have steadily promoted innovation and reforms in the way governments at different levels support disaster management. We intend to follow the same path and precedent, though with a greater sense of urgency in view of the frequency of disasters and their mounting impacts in human and economic terms.

The Evolving Context of Finance Commission's Recommendations

8.9 Several considerations have guided the process of review and framing of our recommendations. The most important of these has been the ToR. A second important consideration has been the impact of climate change. The country has witnessed large-scale floods in different States (Uttarakhand, Tamil Nadu, Assam, Bihar and Kerala), cyclones; Phailin and Hudud (Odisha), Okchi (Tamil Nadu), Titali (Andhra Pradesh and Odisha), Gaja (Kerala and Tamil Nadu), Bulbul, Fani and Amphan (West Bengal) and successive droughts (Rajasthan, Maharashtra, Karnataka, Andhra Pradesh, and Telangana) over the last five years.

8.10 Third, the NDMA and SDMAs, which have become well-established institutions, have expanded the scope of disaster management beyond the traditional response-and-relief functions to include preparedness, mitigation and recovery and reconstruction. Disaster management has become a more specialised area internationally, with a rich body of literature devoted to risk assessment, risk transfer and risk reduction. Its professional needs have also increased at the national and state levels, as States have undertaken diverse initiatives in different areas of disaster management. The involvement of non-government organisations (NGOs) and the private sector has also helped in expanding participation in disaster management activities, as evidenced recently in some disasters of rare severity.

8.11 Fourth, the Union government has used the provisions of the Disaster Management Act for the management of the Covid-19 pandemic. For such events in the past, State Governments used the provisions of the Epidemic Diseases Act, 1897. As epidemics/pandemics are not explicitly provided in the Seventh Schedule of the Constitution – except the related broader subjects like 'public health' and related entries in the State List and 'preventing the spread of diseases from one state to another' in the Concurrent list – some observers had felt that the Constitutional framework leaves scope for improvements in the clarity of the roles of the Union and States. The Second Administrative Reforms Commission (2006) had recommended the addition of an entry in the Concurrent List for "Management of emergencies, natural or man-made". The National Commission to Review the Working of the Constitution (2002) had also recommended for similar action. It is interesting to note that even for passing the Disaster Management Act in 2005, the Parliament had to trace its legislative competence to the Concurrent List entry at No. 23 - 'Social security and social insurance: employment and unemployment'. We are given to understand that the Ministry of Home Affairs has constituted a task force for filling the legislative vacuum on the ambit of disasters. In view of this, we are hopeful that the legislative framework to deal with Covid-19 kind of pandemics and related issues would get streamlined soon and we chose to deal with this issue in the chapter on the health sector rather than in the disaster risk management chapter.

8.12 Fifth, the insurance industry has witnessed significant growth in the last decade, especially after the increase in the limit on foreign direct investment in the sector to 49 per cent under the automatic route in 2015-16. Leading global insurance companies have set up operations in India in collaboration with domestic players and a range of life and non-life insurance services and products have been introduced in the market. As household income has increased, the insurance sector in India is likely to experience strong growth through product innovation, lower premiums, better claims management and regulatory supervision. The insurance sector can be leveraged to substantially reduce the financial burden of disaster management by households, particularly well-to-do ones.

8.13 Finally, India is a signatory to three large global frameworks, which were created in 2015: Sustainable Development Goals (SDGs), Paris Agreement on Climate Change and Sendai Framework on Disaster Risk Reduction (SFDRR).[1] These frameworks call for a set of inter-related actions on the part of governments and other stakeholders, which improve mitigation and adaptation, strengthen regulations, reduce risks and vulnerabilities and build greater resilience at the level of the state and civil society. India's commitment to these frameworks call for enabling actions so that we achieve the key indicators of these development frameworks.

8.14 In combating climate change, India has launched eight missions under the National Action Plan on Climate Change (NAPCC) in the specific areas of solar energy, energy efficiency, water, agriculture, Himalayan eco-system, sustainable habitat, green India and strategic knowledge on climate change. Climate actions at the State level are based on the State Action Plans on Climate Change (SAPCC). Thirty-three States/Union Territories have prepared their SAPCCs in line with the NAPCC, taking into account their specific issues relating to climate change. These initiatives, among other things, outline sector-specific and cross-sectoral priority climate actions. The Union Government is also implementing the National Adaptation Fund for Climate Change (NAFCC) to support adaptation measures of States/Union Territories in areas that are particularly vulnerable to the adverse impacts of climate change. Under the NAFCC, thirty projects have been sanctioned in twenty-seven States to tackle the issues related to adaptation in agriculture, water, forestry, etc. The Government of India has also embarked upon ambitious actions in the areas of renewable energy, afforestation, energy efficiency and urban development. As a result of these efforts, India has achieved 21 per cent reduction in the emission intensity of its gross domestic product (GDP) between 2005 and 2014, thereby achieving its pre-2020 voluntary goal of reducing the emission intensity of GDP by 20-25 per cent from 2005

[1] It is called the Sendai framework as it was adopted by the United Nations member states between 14 and 18 March 2015 at the World Conference on Disaster Risk Reduction held in Sendai, Japan.

levels by 2020.[2] The success of the missions launched under the NAPCC is key to India's commitment to the Paris Agreement to combat climate change and achieve its SDGs.

Studies and International Workshop

8.15 Given the changing context and priorities, we commissioned two studies, in collaboration with the NDMA, to prepare our recommendations. Our recommendations have benefitted from these studies and other workshops that we organised in collaboration with the United Nations Development Programme (UNDP) and the World Bank. In one of these, the UNDP, conducted a review of disaster risk financing practices and presented several recommendations, which cover allocations for the SDRFs and the NDRF, diversification of funding windows and sources of resource mobilisation. The second study, undertaken by the Indian Institute for Human Settlements, Bengaluru has focused on urban risks and vulnerabilities and the capacities and resources, which are required to be addressed by the urban local bodies. An international workshop on disaster risk financing held in Delhi on 12 and 13 November 2018 brought together several international experts, senior government officials, and representatives from the private sector and the insurance industry to discuss various aspects of disaster risk financing. The workshop presented several ideas about the size and allocation of disaster funds and the need for diversifying financial instruments and services for improved risk management.

States' Priorities

8.16 State Governments have also submitted memorandums to the Commission. These include several demands which are broadly similar to what they had raised before previous Finance Commissions. The key demands are:

i. SDRF allocation for States needs to be augmented. A majority of States recommended that the existing criteria for allocation, which is based on past expenditures, needs to be reviewed and the considerations of risk and vulnerability need to be taken into account. However, a few States were of the opinion that allocations should continue to be based on past expenditures.

ii. Some States were of the view that the SDRF should be financed entirely by the Union Government, as they find it difficult to provide their matching contribution.

iii. States and SDMAs should have greater flexibility in disbursing relief. The norms of assistance for the SDRF and NDRF are nationally determined, and do not always have flexibility for the unique needs of certain areas, especially remote and hilly terrains.

iv. The list of items considered for, and norms of, assistance included in the guidelines for the NDRF and SDRF should be revised and improved.

[2] India's Second Biennial Report 2018.

v. The process of assessment for the determination of Union assistance through the NDRF as well as its release should be made faster and more efficient and transparent.

vi. The existing norms of assistance should include more resources for recovery and reconstruction. At present, the allocations are not sufficient for the reconstruction of housing and infrastructure.

vii. Separate allocations need to be made for the resettlement of people in floodplains, coastal areas and hills who have been displaced as a result of the impact of climate change.

viii. Mitigation, which has emerged as an important component of disaster management, should be funded through Union allocation. States are currently funding risk reduction measures on their own, but these funds are insufficient for the task.

ix. States should receive allocation for preparedness measures, which improves their ability to act upon early warnings. These measures would include setting up State Disaster Response Forces, which reduces dependence upon the armed forces, and the National Disaster Response Force.

x. Capacity-building grants introduced by the FC-XIII, which had been very useful in building state capacities in disaster management but were discontinued by FC-XIV, should be restored.

xi. The process of adjustment from the SDRF while releasing the NDRF allocation to the States needs to be reviewed.

xii. States should be provided greater technical assistance through national agencies for supporting their disaster management functions.

xiii. Concerted effort needs to be made to reduce the growing number of incidents of death by lightning. Families of people who die due to lightning should get ex gratia assistance.

xiv. Incidents of elephant attacks, lightning, mining-related fire hazards, snakebites, heatwaves, river and coastal erosion and public health disasters such as Japanese encephalitis, Nipah and the Covid-19 pandemic must be included in the eligible list of disasters for funding support from SDRF and NDRF.

xv. The amount earmarked for State-specific disasters should be increased up to 25 per cent from the current 10 per cent of SDRF allocation, in view of the large number of local calamities not covered under the national list.

Views from Union Agencies and Ministries

8.17 The NDMA has long advocated the setting up of a NDMF and State Disaster Mitigation Funds (SDMFs) so that resources for investment in risk reduction are available. Further, a separate funding window will help implement softer mitigation measures. Such funding is available at present under scattered heads like Climate Change Fund and Sustainability Mission, among others.

8.18 The UNDP study refers to the Advisory Committee of the NDMA emphasising that the release and utilisation of financial resources from the NDRF and SDRFs should lead to measurable outcomes in terms of preparedness and response at the national and state levels, respectively. The Advisory Committee also noted that capacity building for disaster management should be funded through these mechanisms and suggested that there should be greater accountability in the utilisation of these resources. The National Institute for Disaster Management (NIDM) has also suggested the need for a separate funding for preparedness, capacity building, creating awareness, innovation and research. It has suggested allocations for State Institutes for Disaster Management (SIDMs), which are the State resource centres, for strengthening the disaster management system at the State level.

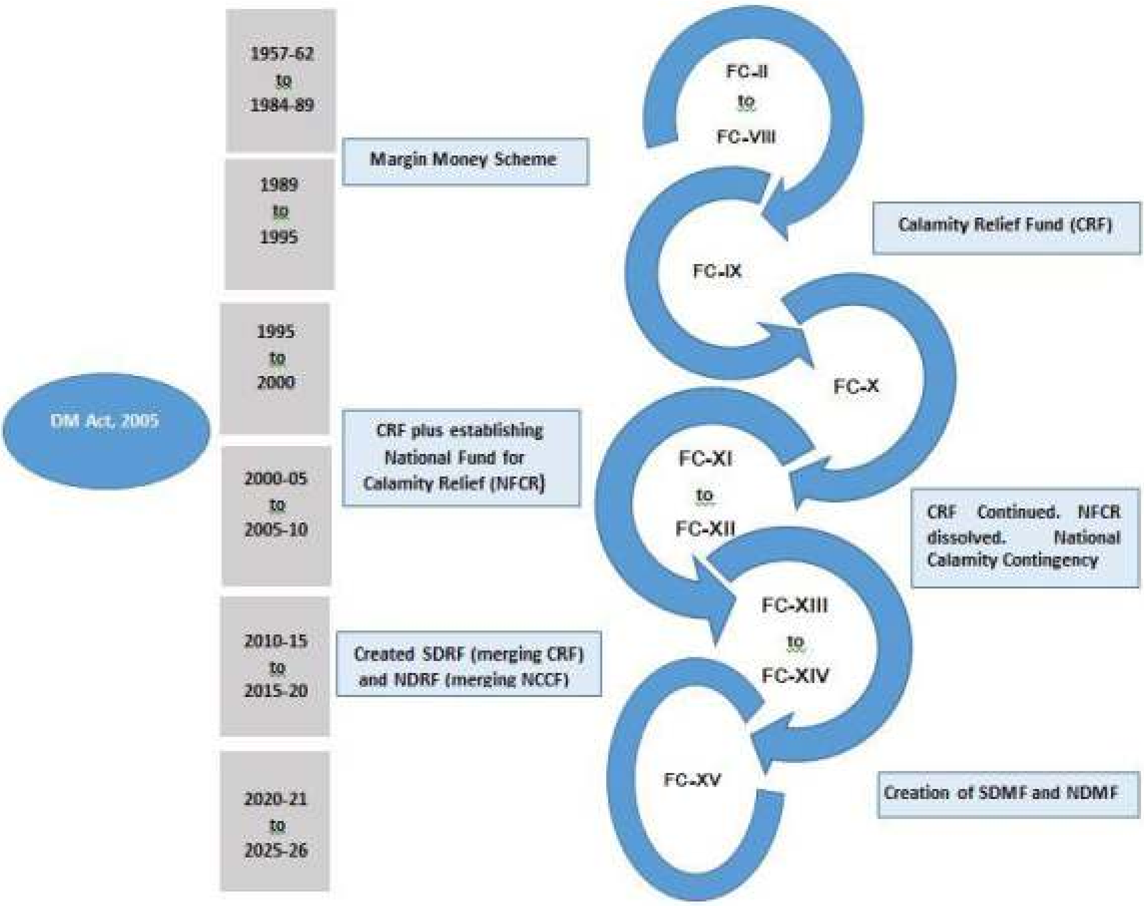
8.19 The ministries expressed their sectoral concerns. The Ministry of Agriculture and Farmers' Welfare has introduced new norms for the declaration of drought, based on a range of indicators, which the States need to follow. It has also suggested that the States should promote the Pradhan Mantri Fasal Bima Yojana (PMFBY) for reducing losses suffered by farmers. The Ministry of Home Affairs has suggested that the SDRF allocations be increased significantly and requested for financial assistance to strengthen and support disaster governance at State and district levels as well as the National Disaster Response Force. The Ministry of Finance suggested that the Commission may consider size of population, area, fiscal discipline and the vulnerability to disasters of each State while determining the size of the SDRF corpus and also earmark allocation for undertaking measures related to disaster preparedness. Further, it has also recommended the setting up and earmarking of allocation for the NDMF. The Ministry of Defence has requested for a review of procedures of funding disaster relief so that reimbursements to defence forces for disaster relief work are received in a near real time frame.

8.20 These priorities and views are based on the actual experiences of dealing with disasters. It casts an important responsibility on us to respond to these clearly and improve the existing system. In doing so, we need to place our recommendations in the context of the disaster risk financing system that has evolved over the years through the wisdom of previous Finance Commissions. We need to improve the existing system in a way that is fiscally sustainable, empowers State and local governments and retains the strength of our system while introducing innovations based on international practices. In brief, these improvements and innovations represent continuity with change. The Commission interacted extensively with the NDMA and other specialists in the field and is happy to note that expertise in disaster management have emerged with the necessary capacity and resources to take reforms and innovations to their logical conclusions.

Evolution of Disaster Risk Financing

8.21 The evolution of disaster risk financing in India over more than six decades in line with recommendations of successive Finance Commissions has been mapped in Figure 8.1. The important aspects of recommendations relating to disaster management from the FC-II (1957-62) to this Commission (FC-XV) are summarised and provided in Annex 8.1.

Figure 8.1: Evolution of Disaster Risk Financing in India



Key Features of Disaster Risk Financing

8.22 The mechanism of disaster risk financing in India reflects the distribution of responsibility in respect of disaster management. It is the State Governments which respond immediately to disasters – organising rescue, evacuation and relief and providing people with assistance. After the disaster event, the responsibility for recovery and reconstruction also lies primarily with the State Governments. The Union Government extends secondary support through deploying the National Disaster Response Force and the armed forces at the request of State Governments. The Union Government and its agencies also provide financial and technical assistance whenever necessary.

8.23 As a result, it is the State Governments which incur most of the expenditures on disaster management. These expenditures are, at present, met through the SDRF. When States exhaust their SDRF resources, they can request financial assistance through the NDRF by submitting memorandums to the Union Government. The NDRF, which is set up at the Union level, replenishes and reinforces the State funds following a set of guidelines. This has been the central feature of disaster risk financing in India, and it has met the requirements of States for disaster assistance on a predictable basis. The broader impact of these allocations is reflected in improved early warning and preparedness nationally and, consequently, reduced human mortality over the years. However, as disaster risk has increased – both in terms of incidence as well as economic impact – the existing disaster risk financing arrangements appear less than adequate in terms of both source and application.

Aggregate Expenditures on Disasters

8.24 *The total expenditure on disaster response and relief across twenty-eight States between 2011 and 2019 has been Rs. 1,66,702 crore (Table 8.1). A steep jump in annual expenditure from 2015-16 could be explained by the upward revision of the norms of assistance in 2015.*

Table 8.1: Aggregate Expenditure of 28 States on Disasters

(Rs. crore)

	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19
Aggregate States' expenditure on disasters*	14008	11425	16923	18416	32952	27727	15803	29448

* Major Head 2245 + expenditure incurred directly from Public Account

Source: Finance Accounts, CAG

8.25 It is observed that, in addition to the assistance from the SDRF and NDRF, State Governments have also been allocating funds from their budgetary resources for response and relief. State Governments also availed of World Bank loans for supporting larger recovery and reconstruction projects.

Conceptual Framework for Disaster Risk Financing

8.26 These expenditures on response and relief need to be viewed in two ways: one, how they impact public finances, and two, whether they help the people reduce their risk and vulnerability. However, it is also time to recognise that such a huge expenditure should also take poverty and disaster risk into consideration, as these are closely linked.

8.27 In public finance, disasters are looked upon as a contingent liability of the state. Contingent liabilities refer to (government) obligations that are triggered when a potential, but uncertain, future event occurs. The allocations made through the SDRF and NDRF help governments meet their contingent liabilities. However, the existing approach to meeting the contingent liabilities has two weaknesses. First, it is aimed at *meeting* the contingent liabilities, not *reducing* them. Governments should invest in estimating risk exposure and taking appropriate measures to reduce contingent liabilities. Second, the SDRF and NDRF, which function as dedicated reserve funds, are presently the only financial mechanisms for meeting the contingent liabilities. When risk exposure is high and contingent liabilities could increase significantly, multiple instruments and funding windows need to be introduced to meet these liabilities.

8.28 At the community and household level, disaster funds also need to be considered as means of transfer of resources to the people. When people have access to cash, they take several measures to address their welfare losses. They adopt coping strategies in response to disasters, and if they still have resources, they try to recover from the impact and resume their livelihoods. As the size of assistance is generally low, coping with disasters emerges as the primary objective.

8.29 If people need better protection against disasters, they need to build and acquire assets. These assets could include household assets, such as houses or sources of livelihoods, or community assets such as roads, drainage and health centres. Assets provide a sense of well-being and act as a defence against uncertainties and losses associated with disasters. Households with more assets are less likely to experience welfare losses following the occurrence of a disaster event. A disaster assistance strategy, therefore, should not just help people cope with the impact, but should also help them recover from the impact and reduce their risk and vulnerability.

8.30 These two broad conceptual approaches have simultaneously guided our deliberations and helped us frame our recommendations in more forward-looking terms. We envisage that not only should the Union and State Governments have adequate funds to deal with disasters, but these funds should also be sufficiently diversified to support a framework which includes all aspects of disaster management. Risks posed by natural hazards have increased and they need a more comprehensive and balanced response, as compared to the present approach which focuses just on response and relief. Further, the transfer of resources on such a scale should have a clear, discernible impact on poverty and risk which affects households and communities, particularly the poorer sections, all over the country.

Guiding Principles for the FC-XV

8.31 Based on a review of the established practices, both national and international, we are guided by the following four principles.

8.32 First, in all countries with a federal system, while it is the union or federal government which provides disaster assistance, the primary responsibility for disaster management rests with states. Whether it is the United States, Canada or Australia, the federal governments provide the assistance based on a declaration of disaster. In India too, the Union Government has the responsibility for disbursing assistance to the States, either through the NDRF, SDRF or other transfers. SDRF is a well-established mechanism, mandated by the legal provisions of the Disaster Management Act. In view of its long evolution, legal status and operational utility, SDRF should continue as the main vehicle of state resources for disaster management.

8.33 Second, a disaster management cycle consists of several functions – prevention, preparedness, response, mitigation, recovery and reconstruction. A disaster management system, in its infancy, does lay stress on response. However, as it develops further, it advocates other disaster management functions too. The Commission, therefore, having acknowledged the expanding field of disaster management and earmarked financial allocations for different functions, covering both relief and mitigation and provisions made under the Disaster Management Act, had recommended, in its report for 2020-21, the creation of a National Disaster Risk Management Fund (NDRMF) and State Disaster Risk Management Funds (SDRMF) at State level in its first report.

8.34 Third, after subsuming a substantial amount of the National Calamity Contingency Duty (NCCD) into the goods and service tax (GST) and the creation of SDMF and NDMF, the Union Government's fiscal space for disaster management at the national level has reduced significantly. The FC-XIV had recommended a change in the financing pattern of SDRF by the Union and States in the ratio of 90:10 for all States. The Union Government had accepted the recommendation made by the FC-XIV with the modification that contribution of the States to SDRF will continue as before; and that once GST is in place, the recommendation of the FC-XIV on disaster relief would be fully implemented. As the GST introduced in July 2017 has not stabilised, the Union Government decided that its share in SDRF during the award period of FC-XIV shall remain in the same ratio as it was in FC-XIII award period. **Hence, the sharing arrangement recommended by the FC-XIII (25 per cent contribution by all States, except for the North-Eastern and Himalayan (NEH) States which shall contribute 10 per cent) continued and we consider it appropriate to maintain the same arrangement.**

8.35 Fourth, as the system of disaster financing matures, the financial services and instruments for disaster management need to be diversified. Public funds serve a very important purpose in providing predictable support to states. However, these funds are seldom sufficient. We need to recognise the importance of alternative sources of funding and the role that market instruments can play in risk management.

8.36 Guided by these principles, we have made recommendations on all aspects of disaster risk financing. Our first set of recommendations relate to the size and allocation of SDRMF and NDRMF and funding windows for disaster management functions. Recognising some of the challenges posed by emerging risks and vulnerabilities, we have recommended earmarked allocations within the overall allocation.

8.37 We follow it up with recommendations for strengthening systems, guidelines and capacities which need to support the planning and utilisation of resources allocated at the Union and State levels. We believe that a certain level of investment in the governance framework will go a long way in improving the results and outcome in this sector.

8.38 We also follow it up with presenting a set of ideas and innovations which promote market-based instruments of risk management and identify alternative sources of funding. These innovations require further elaboration and due diligence before they are introduced and implemented. However, we believe that it is time to implement these interventions to diversify sources of disaster risk financing and improve the disaster risk management framework in the country.

8.39 Before we present our recommendations, we would like to mention two issues which we have decided not to engage with. Several States have asked for a revision in the norms for assistance provided from SDRF/NDRF now covered under SDRMF/NDRMF. While their request may be justified, such a task is beyond the scope of the Finance Commission. It is the Ministry of Home Affairs which should periodically revise the norms of assistance in consultation with the States. We take note of the fact that the norms are revised periodically, and the practice should continue.

8.40 The existing norms of assistance allow 10 per cent of SDRF to be used for relief assistance for people affected by lightning and other local disasters. In case States are more seriously affected by local disasters, they should bring it to the attention of the Ministry of Home Affairs and NDMA and seek relaxation of the norms. We are satisfied with the existing norms.

National and State Disaster Mitigation Funds

8.41 There is a concept of flexi-fund in development programmes, which allows State Governments to spend 25 per cent of programme resources on implementing mitigation measures. However, in actual practice, these flexi-funds have not been utilised for this. In 2016, the Supreme Court directed the Union Government to set up the NDMF in accordance with Section 47 of the Disaster Management Act. But the NDMF has not been constituted till now. The ministries of Finance and Home Affairs, in their memorandum, as well as the NDMA, have argued for such a fund to be set up without any further delay.

8.42 There is lack of clarity about mitigation in policy and planning discussions. Mitigation refers to "lessening or minimising of the adverse impacts of a hazardous event". It includes both structural measures (constructing flood embankments and sea walls) as well as non-structural measures (developing building codes and a land use plan) aimed at reducing risks.

8.43 Section 2 (i) of the Disaster Management Act defines 'mitigation' as measures aimed at reducing the risk, impact or effects of a disaster or a potential disaster situation. Hence mitigation could be considered as all related measures, including large scale interventions such as construction of coastal walls, flood embankments, etc. But these are very resource intensive measures which should be pursued through regular development schemes and not from the mitigation fund. **We are of the view that the mitigation fund created should be used for those local level and community-based interventions which reduce risks and promote environment-friendly settlements and livelihood practices.**

8.44 Mitigation, as it is commonly understood and practised in disaster management, is closely related to climate change adaptation. Many interventions such as water resource management, afforestation and livelihood diversification could be considered as helping both disaster mitigation and climate change adaptation. It would, therefore, be desirable to link mitigation to climate change adaptation and use the mitigation fund for supporting adaptation measures as well. At the same time, it should be noted that ‘mitigation’ is defined differently in climate change policy, where the term is used for the reduction of greenhouse gas emissions that are the source of climate change.

8.45 Given the increasing levels of risks posed by climate change, unregulated urbanisation and over-exploitation of natural resources such as land, water and forests, the idea of a mitigation fund addressing risks and vulnerabilities at the local level has become imperative. Setting up such a mitigation fund, as recommended in our report for 2020-21, will provide a full expression to the objectives of the Disaster Management Act. It would also be in keeping with international practices related to supporting mitigation, along with response.

8.46 **The Commission, taking cognizance of need for mitigation funds at both the national and State levels in accordance with the provisions of the Disaster Management Act, has suggested allocations at these levels**. Mitigation funds should typically provide small grants for community-based local initiatives, pursuing an approach which promotes adjustment with hazards through soft measures, rather than controlling them through hard measures. An indicative list of mitigation activities is provided in Annex 8.2 and the Ministry of Home Affairs, in consultation with NDMA, may issue a detailed list of mitigation activities as part of the guidelines of the Mitigation Fund. The NDMA and SDMA should supervise the National and State Disaster Mitigation Funds as per the provisions of the Act.

Size and Allocation of Disaster Risk Management Funds for States

8.47 One of the key issues before the Finance Commission is the determination of the size of the SDRF and its inter-state distribution. This is an important concern for State Governments as they see the SDRF as the primary source of funds for disaster response. Though the Disaster

Management Act stipulates the constitution of the SDRF, it does not mention the size or source of the fund. The responsibility for determining this, therefore, has been given to the Finance Commission in its ToR. We have now decided to call the basic fund for States as State Disaster Risk Management Fund (SDRMF) which includes both SDRF and SDMF.

8.48 Successive Finance Commissions have pursued an expenditure-based approach to determine the allocation of funds for disaster management to each State. The expenditure-based allocation, however, tends to favour the better-off States, which can allocate resources and show higher expenditures. This gives them a larger base, which allows for even greater percentage increase in future allocations. In contrast, States with a lower initial allocation and expenditure see a lower increase in their allocations. The divergence in the allocations between these groups of States will progressively increase, creating a highly asymmetric situation.

8.49 Several States, which have received lower SDRF allocations, have highlighted this asymmetry arising from the expenditure-driven method. If such an approach persists, it will only aggravate such asymmetry in the inter-state allocation. Successive Finance Commissions have acknowledged the limitations of this approach and have indicated they would prefer a methodology which reflects the risk and vulnerability profile of each State. In fact, the FC-XIV had recommended in its report that such a risk and vulnerability assessment be conducted for the entire country to support the process of allocation. However, an integrated risk and vulnerability assessment at the national level has not yet been approved.

8.50 In view of these concerns, a detailed methodology was worked out which promotes equity and fairness and need-based allocation of funds to States for disaster management. The Commission has used the methodology for determining State-wise allocation for SDRMF in the manner as it had used in its report for 2020-21. It is important to note that this methodology has been the outcome of the deliberations of the Commission with main stakeholders like the Ministry of Home Affairs, NDMA, NITI Aayog, State Governments and UNDP as well as the latter's report on disaster risk financing.

8.51 **This new methodology, which replaces the expenditure-driven methodology, is most inclusive, as it represents a combination of capacity (as reflected through expenditure), risk exposure (area and population) and hazard and vulnerability (risk index).** The new methodology as indicated in the first report is detailed in Annex 8.3 for ready reference.

8.52 Given the high degree of uncertainties amidst the Covid-19 pandemic followed by the long period of lockdown, the Commission anticipates a sharp contraction in the domestic economy. Consequentially, there will be considerable squeeze in the availability of total divisible resources, at least in the near term. Secondly, we had already recommended a substantial increase in the allocation of grants for the total corpus at the State level to Rs. 28,983 crore in 2020-21, compared to Rs. 13,465 crore in 2019-20[3], keeping in view the demands of the mitigation fund that was recommended by us. Thus, the Union share for this amount increased by 115 per cent in 2020-21 against the 2019-20 budget estimates (BE). **The Commission,**

[3] https://www.ndmindia.nic.in/images/gallery/Statewiseallocation_SDRF_2015-2020.pdf

therefore, recommends that allocation for SDRF and NDRF for 2021-22 be retained at the level of 2020-21 and thereafter be set to increase by 5 per cent annually from 2022-23 to 2025-26.

8.53 **The total allocation for disaster management (SDRMF) to the States for the duration of the award period is Rs. 1,60,153 crore (Table 8.2)**. We recommend that the total State allocation for SDRMF be divided into SDRF and SDMF, which together address the full cycle of disaster management needs – response and relief, recovery and reconstruction, preparedness and capacity-building and mitigation.

Table 8.2: Annual Allocation for States for Disaster Management

(Rs. crore)

Year	2021-22	2022-23	2023-24	2024-25	2025-26	Total
Union share	22184	23294	24466	25688	26969	**122601**
States' share	6799	7137	7491	7864	8261	**37552**
Total (Union + States' share)	**28983**	**30431**	**31957**	**33552**	**35230**	**160153**
Percentage increase over previous year	-	5	5	5	5	

8.54 **The SDRF would receive 80 per cent of the total SDRMF, while the SDMF would get 20 per cent of the allocation. Within the SDRF allocation of 80 per cent, there would be three sub-allocations: Response and Relief (40 per cent), Recovery and Reconstruction (30 per cent) and Preparedness and Capacity-building (10 per cent). While the funding windows of SDRF and SDMF are not inter-changeable, there could be flexibility for re-allocation within the three sub-windows of SDRF**. Table 8.3 shows how the overall States allocation will be divided among the SDMF and SDRF, and further three sub-allocations within the SDRF:

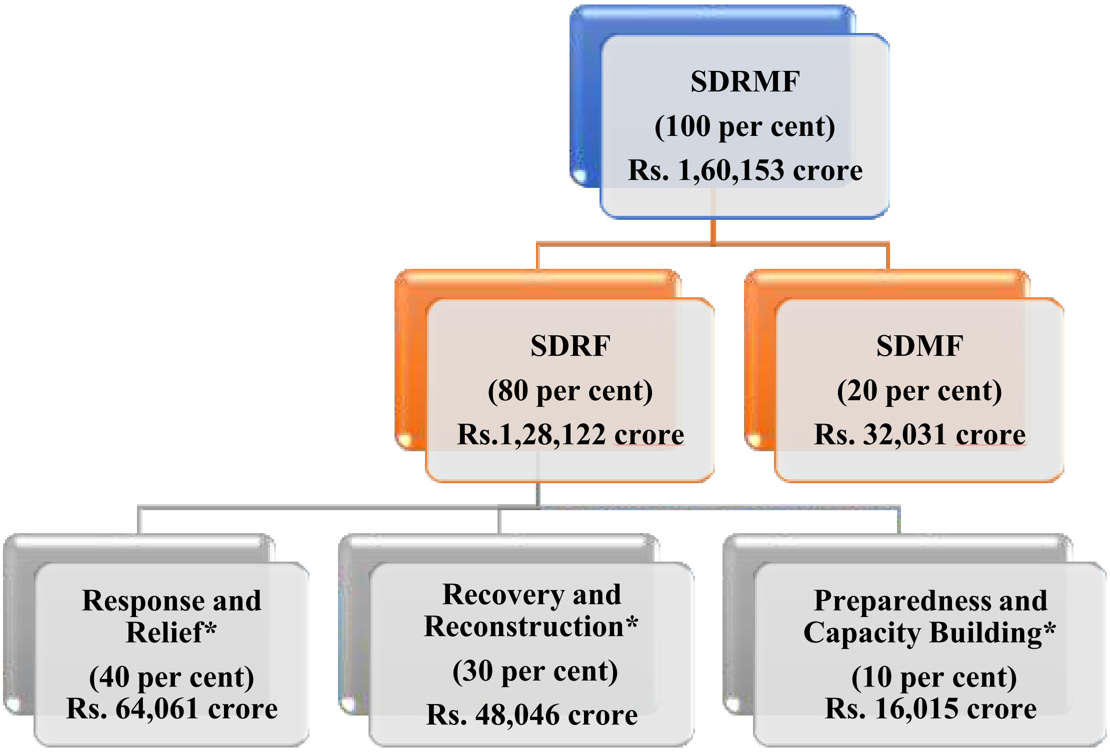
Table 8.3: Distribution of Total States Allocation

(Rs. crore)

Funds (percentage distribution)	Amount
SDMF (20)	32031
SDRF (80)	128122
i) Response and Relief (40)	64061
ii) Recovery and Reconstruction (30)	48046
iii) Preparedness and Capacity Building (10)	16015
Total (SDMF + SDRF) (100)	**160153**

8.55 The State-wise allocations based on the new methodology are provided in Annex 8.4 and Annex 8.5. A snapshot of the sub-categories and earmarked funds for SDRMF recommended by the Commission for the period 2021-26 is depicted in Figure 8.2.

Figure 8.2: Earmarked Funds for SDRMF



** Reallocation within the three sub-windows is recommended.*

Allocation of Funds for National Disaster Risk Management Fund

8.56 The NDRF represents the national disaster reserve, which supplements the SDRF. The NDRF needs to be budgeted and aligned with the SDRF in such a way that it assists States and supplements their SDRF allocations, rather than becoming the main source of disaster assistance.

8.57 The release of funds through the NDRF has been increasing exponentially. During the FC-XII period, the total release through the National Calamity Contingency Fund (NCCF), as it was known then, was Rs. 10,938 crore. During the FC-XIII period, the total release through the NDRF rose to Rs. 17,559 crore, an increase of 61 per cent over the FC-XII cycle. During FC-XIV (2015-20), the NDRF allocation went up to Rs. 57,146 crore, an increase of 225 per cent over the FC-XIII cycle. The projection during the FC-XIV is based on the expenditure incurred during the first three years of its cycle and budgeted expenditure for the last two years of its cycle.

8.58 The NDRF was funded through the proceeds of the NCCD. The NCCD on most of the commodities has now been subsumed under the GST and is now levied on very few products such as tobacco and crude petroleum. The proceeds of the NCCD, therefore, would not be adequate to fund the NDRF. Hence, it is necessary to make an annual budgetary provision for the NDRMF, into which the NDRF has been subsumed.

8.59 As the provision for the NDRF is linked directly to expenditure, **we recommend a total national allocation of Rs. 68,463 crore for NDRMF for the period from 2021-22 to 2025-26** (Table 8.4), in view of the similar method followed while estimating the size of the SDRMF. In other words, the size of NDRMF for the first year (2021-22) has been kept at the same level of 2020-21 and thereafter, an annual increase of 5 per cent for the rest of the award period has been provided for.

Table 8.4: Proposed Annual National Allocation for Disaster Management

(Rs. crore)

2021-22	2022-23	2023-24	2024-25	2025-26	TOTAL
12390	13010	13660	14343	15060	68463

8.60 **The Disaster Management Act stipulates two windows of funding at the national level, namely NDRF and NDMF. We have now proposed that these two will fall under the overall amount fixed at the national level called NDRMF. The total allocation for NDRMF should thus be divided among NDRF and NDMF in an 80:20 ratios (Table 8.5).**

Table 8.5: Distribution of Total National Allocation

Funds	Amount (Rs. crore)	Percentage Share
NDMF	13693	20
NDRF	54770	80
Total (NDMF+NDRF)	**68463**	**100**

8.61 **We further suggest that three sub-allocations should be made within the NDRF corpus, similar to the SDRF: Response and Relief (40 per cent); Recovery and Reconstruction (30 per cent); and Preparedness and Capacity-building (10 per cent) (Table 8.6). If required, the Ministry of Home Affairs may examine the need for amending the Disaster Management Act to create such funding windows. While the funding windows for NDRF and NDMF are not interchangeable, there could be flexibility for re-allocation within the three sub-windows of NDRF, subject to the condition that earmarked allocations shall not exceed 10 per cent of the amount earmarked for that sub-window.**

Table 8.6: Windows of NDRF

Windows of NDRF	Amount (Rs. crore)	Percentage Share
Response and Relief	27385	40
Recovery and Reconstruction	20539	30
Preparedness and Capacity Building	6846	10
Total NDRF Corpus	54770	80

8.62 If the NDRMF releases to the States exceed the total budget provision, the Union Government could make additional provision for resources. However, a budget plan for the next five years will help the NDRMF to support States more systematically.

8.63 We recommend that all the Central assistance through the NDRF and NDMF should be on a cost-sharing basis. As the total allocations for the States have registered a significant increase, **there is a case for introducing cost-sharing arrangements on a graded basis, when States request Union assistance through different windows. States should contribute 10 per cent for assistance up to Rs. 250 crore, 20 per cent for assistance up to Rs. 500 crore and 25 per cent for all the assistance exceeding Rs. 500 crore from the NDRF and NDMF**. Such a cost-sharing arrangement would discourage exorbitant demands prepared on the considerations of competitive populism. The graded contribution would also be in keeping with international practice.

Diversifying Funding Windows

Recovery and Reconstruction Facility

8.64 At present, there is no funding window for recovery and reconstruction to support States. State Governments, therefore, have to request the Union Government for assistance. However, the guidelines for the NDRF and SDRF are oriented towards response and relief, and support for recovery and reconstruction is minimal.

8.65 When States are faced with disasters of rare severity, most of them seek loans from the World Bank, with the approval of the Union Government. However, access to such loans depend upon States' overall borrowings. Besides, States cannot approach the World Bank every time they suffer damage and loss because of such disasters.

8.66 In the past, the Planning Commission and Finance Commission have opined that resources for recovery should be allocated through development assistance. In the case of disasters of rare severity, the Union Government would provide a part of resources needed for recovery and reconstruction to States through additional Central allocation. However, with the discontinuation of the distinction between Plan and non-Plan expenditure, there is no such mechanism to support States at present.

8.67 Recovery presents an opportunity to get development activities off the ground as governments and communities spend recovery assistance on rebuilding infrastructure and houses, reviving livelihoods and improving civic services. The present near-total expenditure focus on response and relief does not leave any resources left for recovery. Without recovery, development gets seriously affected, which deepens the incidence of poverty and backwardness. Many States in the northern and eastern parts of the country experience flooding on recurrent basis and, without much recovery, these States tend to lag in development, which contributes significantly to regional imbalances.

8.68 Based on a clear appreciation of the pressing needs to rebuild assets and livelihoods, **we have recommended setting up a Recovery and Reconstruction Facility, both within the SDRF and NDRF, and suggested that 30 per cent of the resources available with these two funds be earmarked for this purpose.** When the resources are used for recovery and reconstruction, these would help people affected by disasters on a long-term basis.

8.69 Assistance for recovery and reconstruction needs to be determined on the basis of an assessment of damage and loss. **Governments do not pay for the entire cost of recovery and reconstruction, and the assistance could be a percentage of the total cost. Recovery and reconstruction is generally a multi-year programme and the assistance needs to be released annually against expenditures**. Further, assistance for recovery and reconstruction needs to be shared between the Union and States. When we apply these filters - needs assessment, recovery assistance on a partial basis, annual releases against expenditures, and cost-sharing between the Union and States - the cost of recovery and reconstruction can be easily managed on a fiscally sustainable basis.

Preparedness and Capacity-building Grants

8.70 **State Governments need to have essential disaster preparedness to respond effectively to disasters. Their institutions and facilities must be equipped and well-functioning to meet the exigencies of a situation**. The FC-XIII had introduced the capacity-building allocation by recommending a grant of Rs. 525 crore, linked to the overall size of the SDRF.

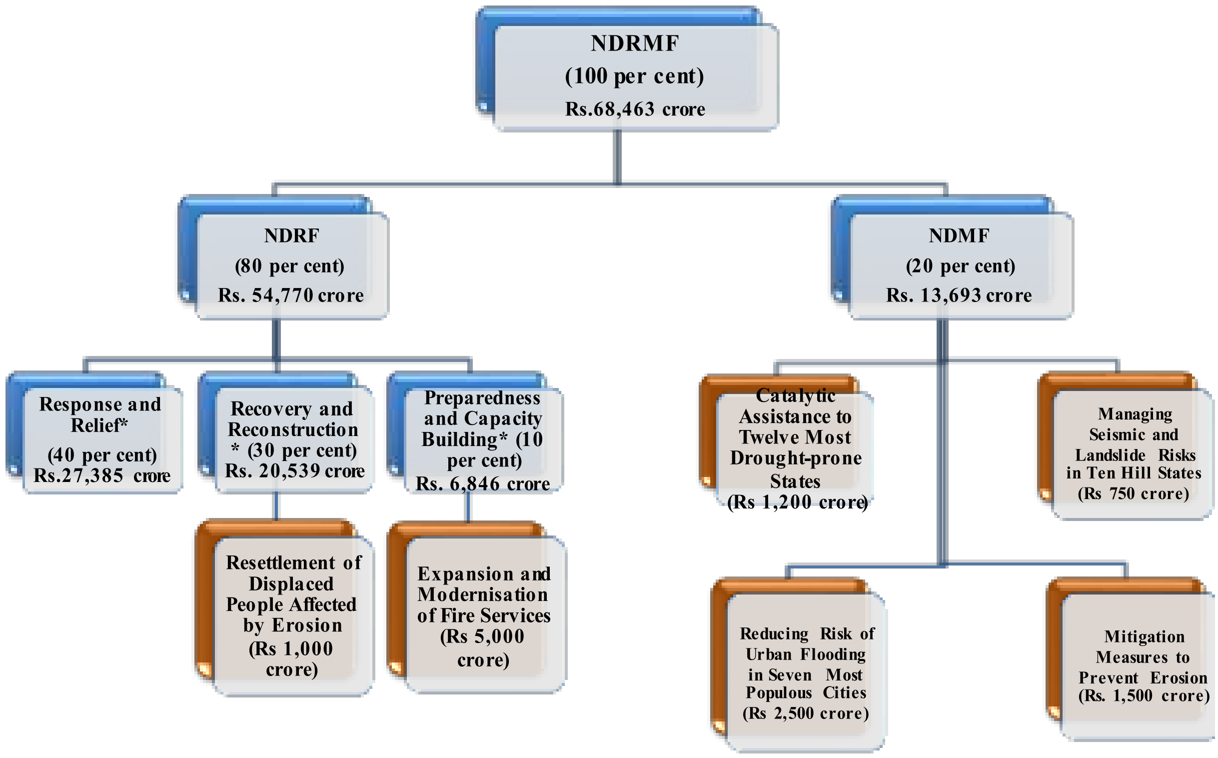
8.71 This capacity-building grant proved useful for States to develop their preparedness levels. Many States used these resources to procure emergency equipment and improve their search and rescue capacities. Though several States asked for the continuation of capacity-building grants, the FC-XIV did not include this in its recommendations and left this issue to be dealt with by the Union and State Governments.

8.72 The preparedness and capacity-building components were included in the guidelines and norms of assistance for the utilisation of SDRF and NDRF, with the State Governments having the flexibility to use 10 per cent of their resources for the procurement of essential search, rescue and evacuation and communication equipment, and 5 per cent on capacity-building activities. In spite of this flexibility, the claim upon the SDRF was too heavy to allow States to use these resources for equipping their search and rescue teams. The lesson that emerged from such an arrangement is that these resources can be utilised for capacity-building and procurement only if they are earmarked.

8.73 To support the critical institutional, functional and technological components of the disaster management system, it would be essential to earmark allocations for preparedness and capacity-building. **Such an allocation should be 10 per cent of the total State allocation and should be accessed through a sub-window within SDRF. These funds are meant to support the SDMA, SIDM, training and capacity-building activities and emergency response facilities. State Governments would not use these resources for personnel support. It is recommended that a separate set of guidelines be developed for preparedness and capacity-building grants. A similar window of preparedness and capacity-building should be made available within the NDRF, which will largely be used to support national agencies**.

8.74 A snapshot of the sub-categories and earmarked funds for NDRMF recommended by the Commission for the period 2021-26 is depicted in Figure 8.3.

Figure 8.3: Earmarked Funds for NDRMF



** Reallocation within the three sub-windows is recommended, subject to the condition that earmarked allocations under the respective sub-window is duly fulfilled.*

8.75 We recommend six types of earmarked allocations: two under NDRF (Expansion and Modernisation of Fire Services; Resettlement of Displaced People affected by Erosion) and four under NDMF (Catalytic Assistance to Twelve Most Drought-prone States; Managing Seismic and Landslide Risks in Ten Hill States; Reducing the Risk of Urban Flooding in Seven Most Populous Cities; and Mitigation Measures to prevent Erosion). These priorities are listed as follows:

Expansion and Modernisation of Fire Services

8.76 Fire services are the core first responders, particularly in urban areas. They provide a range of services, which include search and rescue, evacuation and immediate medical assistance. Incidents of fire in metropolitan and smaller cities have increased. According to National Crime Records Bureau data, 1,85,383 people lost their lives due to fire accidents between 2010 and 2019. This is an average of fifty-six deaths a day.

8.77 Fire services in the country lack resources and are ill equipped to provide adequate fire safety cover to the population. The NDMA has estimated the extent of deficiency of fire services in the country: fire stations - 97.54 per cent; firefighting and rescue vehicles - 80.04 per cent; and fire personnel - 96.28 per cent. It has recommended for allocation of grants worth Rs. 7,000 crore to States to meet these shortages. Such an investment would be completely justified and timely to save lives and economic losses which are mounting every year. As these resources need to be provided on a cost-sharing basis, we recommend a provision of Rs. 5,000 crore for strengthening fire services at the State level in the next five years. These resources could be allocated through the Preparedness and Capacity-building component of the NDRF. States need to apply for these funds, for which they should contribute 10 per cent of the amount sought. These resources could ideally provide a top-up to the existing programmes.

Catalytic Assistance to Twelve Most Drought-prone States

8.78 Drought is considered to be a silent killer and has a creeping effect. Several States such as Andhra Pradesh, Karnataka, Maharashtra and Rajasthan have suffered drought on a recurrent basis. These States are situated in low rainfall zones (less than 750 millimetres annually) and poor rainfall in successive years seems to have aggravated the intensity of drought. Even States such as Madhya Pradesh and Uttar Pradesh, where the annual rainfall ranges between 750 and 1125 millimetres, have suffered droughts. Small and marginal farmers in these States, which are largely engaged in rain-fed farming, are seriously affected by droughts.

8.79 In view of persistent droughts, widespread agrarian distress and large-scale expenditure on drought relief, it would be critical to establish a long-term drought management mechanism at the State level. While both the Union and State Governments have set up different schemes to mitigate the impact of drought, these interventions have not come together on the ground.

Implemented as they are by different agencies, these schemes have limited impact at the local level.

8.80 States need to develop long-term drought mitigation plans to address the challenges posed by successive droughts. These plans need to include area-specific farming systems, improvements in surface and ground water management, promoting efficiency of water use, agro-forestry schemes and solar energy installations. Each drought-affected district should develop a plan to bring about convergence of these interventions and monitor them on a long-term basis.

8.81 To develop district-level drought mitigation plans, we recommend allocating Rs. 100 crore each to twelve most drought-prone States over five years. These States are: Andhra Pradesh, Bihar, Gujarat, Jharkhand, Karnataka, Madhya Pradesh, Maharashtra, Odisha, Rajasthan, Tamil Nadu, Telangana, and Uttar Pradesh (Table 8.7). It would involve a total allocation of Rs. 1,200 crore over the FC-XV award period (2021-2026). The assistance could be provided through the proposed NDMF.

Table 8.7: Allocation to Drought-prone States for Drought Mitigation

(Rs. crore)

States	Total Allocation
Andhra Pradesh	100
Bihar	100
Gujarat	100
Jharkhand	100
Karnataka	100
Madhya Pradesh	100
Maharashtra	100
Odisha	100
Rajasthan	100
Tamil Nadu	100
Telangana	100
Uttar Pradesh	100
Total	**1200**

Managing Seismic and Landslide Risks in Ten Hill States

8.82 The Himalayas are not only the youngest mountains in the world, they are also among the most seismically active areas. The Indian Seismic Zonation Map classifies this region into Zones IV and V, the highest seismicity zones in India. The States of Himachal Pradesh, Uttarakhand and all the north-eastern States are in these two zones.

8.83 Seismic activities in the region trigger landslides too and both the risks are closely connected. Landslides are also triggered by heavy rains and flooding in the region. The entire Himalayan region experiences landslides on a frequent basis, causing death, destruction and economic disruptions.

8.84 It is critical that the two hill States – Himachal Pradesh and Uttarakhand – and all the eight states in the north-east undertake a mitigation programme to address the earthquake and landslide risks. The mitigation programme implemented over five years will also help these States in developing technical capacities and resources.

8.85 We recommend an allocation of Rs. 750 crore from the proposed NDMF for seismic and landslide risk reduction in the Himalayan region during the next five years. It would include an allocation of Rs. 250 crore each to Himachal Pradesh and Uttarakhand at the rate of Rs. 50 crore per year, and Rs. 250 crore for all the States in the north-east (Table 8.8). The allocation for the north-eastern States could be increased further if they are able to implement the programme and utilise these resources.

Table 8.8: Allocation for Managing Seismic and Landslide Risks in Hill States

(Rs. crore)

States	Annual Allocation	Total Allocation (2021-26)
Himachal Pradesh	50	250
Uttarakhand	50	250
All North-Eastern States		250
Total		**750**

Reducing the Risk of Urban Flooding in Seven Most Populous Cities

8.86 All the major cities in India are heavily affected by floods. The frequency of urban floods has increased, with not a year passing without large parts of some city or the other getting submerged. In December 2015, Chennai was heavily flooded, when the city received a rainfall of 340 mm in the course of just one day. In July 2018, Mumbai received 864.5 mm of rainfall within a week, which was nearly the rainfall for the entire month and in July 2019 over twenty people died due to floods in the city. In both cities, life and economic activity were disrupted as a result.

8.87 While State Governments have sought to address these issues, it requires an approach which brings together urban planning, ecological conservation and disaster management together. State Governments need to support a set of interventions which are implemented by multiple urban agencies working together. In view of the regular incidence of flooding and heavy losses, we recommend that a targeted allocation be made to address urban flooding in seven cities (excluding Delhi), which have a metropolitan area with a population exceeding five million.

These cities are: Mumbai, Chennai, Kolkata, Bengaluru, Hyderabad, Ahmedabad and Pune.

8.88 A similar approach and fund allocation is applicable to Delhi as well. However, since Delhi is a Union Territory (with Legislature), we have not made a separate allocation for it. The Ministry of Finance shall make the requisite fund allocation for Delhi for the award period of this Commission to reduce the risk of urban flooding.

8.89 We recommend that an allocation of Rs. 100 crore per year be made for each of the metros – Mumbai, Chennai and Kolkata – to prepare integrated solutions for flood management (Rs. 1,500 crore over five years). For the next tier of cities – Bengaluru, Hyderabad, Ahmedabad and Pune – an allocation of Rs. 50 crore per year should be made to prevent urban flooding (Rs. 1,000 crore over five years). The total assistance for urban flood management based on the proposed assistance is estimated to be Rs. 2,500 crore during our award period (Table 8.9). This amount may be allocated through the proposed NDMF. These allocations must be made on a cost-sharing arrangement, with the cities contributing 10 per cent of the resources.

Table 8.9: Allocation to Cities for Reducing the Risk of Urban Flooding

(Rs. crore)

Cities	Annual Allocation	Total Allocation (2021-26)
Mumbai	100	500
Chennai	100	500
Kolkata	100	500
Bengaluru	50	250
Hyderabad	50	250
Ahmedabad	50	250
Pune	50	250
Total	**500**	**2500**

Coastal and River Erosion

8.90 Coastal and river erosion can have serious adverse socio-economic consequences. A study conducted by the Space Application Centre (SAC), Ahmedabad, in association with the Central Water Commission (CWC), in May 2014 noted that around 45 per cent of India's coastline is facing erosion. The most telling example of river erosion has been Majuli island in Assam. Considered to be the world's largest riverine island, it is slowly shrinking because of erosion by the Brahmaputra river over decades. Satellite imagery shows the landmass of the island has shrunk from 1,256 square kilometres in 1971 to only 524.2 square kilometres in 2016, which means it has lost more than half of its area during the last forty-five years.

8.91 We have considered two aspects related to erosion: mitigation measures to prevent erosion (under NDMF) and resettlement of displaced people affected by erosion (under NDRF).

i) **Mitigation Measures to Prevent Erosion**

8.92 Coastal erosion, one of the recurring natural hazards, generally occurs as part of the erosion-accretion cycle. It is feared that with the predicted rise in sea levels due to climate change, there will be an increase in the rate of beach erosion as well as loss of coastal properties. In addition, the floods emanating from the Himalayan rivers wreak great annual damage, especially for the people of Assam, Bihar, Uttar Pradesh and West Bengal. Such disasters impede incentives for economic activity in these regions and make it difficult for the inhabitants to break out of their cycles of recurrent damage and poverty. **To reduce the annual flood disasters caused by regular river erosion, major capital works are required for proper upstream river basin management, with gestation spreading over ten to fifteen years. These cannot be accommodated through Finance Commission awards. Therefore, we are persuaded to recommend that such projects should be considered as national priority projects for execution. Only such holistic projects can help address flood mitigation properly. A piecemeal approach will simply witness yearly washing away of river embankments.**

8.93 In order to mitigate the risk of erosion, we recommend an allocation of Rs. 1,500 crore from the proposed NDMF for our award period. States would need to apply for these funds for undertaking erosion mitigation works and NDMA and/or Ministry of Home Affairs may develop suitable norms for this purpose. These allocations must be made on a cost-sharing arrangement, with the States contributing 10 per cent of the resources.

ii) **Resettlement of Displaced People Affected by Erosion**

8.94 The displacement caused by river erosion has taken a regional dimension covering the States of Assam, Bihar, Odisha and West Bengal. Rising sea levels have also threatened habitats. The Sundarbans in West Bengal is a climate hot spot threatened by rising sea water. The coastal fisher-population, who are amongst the most vulnerable communities, suffer loss of life and property as a result of sea erosion.

8.95 Given the magnitude of the problem, we recommend that both the Union and State Governments develop a policy to deal with the extensive displacement of people caused by coastal and river erosion. People must be provided with alternative settlements and they should receive some assistance from the government. To implement this policy, we allocate Rs. 1,000 crore to address the issue of displacement at the national level. State Governments can request the assistance for resettling affected people. Such assistance should be made available through the resources available from the recovery and reconstruction window of the NDRF. However, State Governments should avail these resources on a cost-sharing basis, contributing 10 per cent of the cost of resettlement. Such resettlements should ensure safer sites for the people being resettled.

8.96 **In view of the urgency and importance of these preparedness, risk reduction and recovery priorities at the national level, we recommend Rs. 11,950 crore from different windows of the NDRF and NDMF to address these issues (Table 8.10).** The NDMA should supervise the allocation and utilisation of these resources by framing the guidelines and setting the indicators.

Table 8.10: Summary of Earmarked Allocations

(Rs. crore)

Funding Windows	Earmarked Purpose	Total Allocations (2021-26)
NDRF (Capacity Building)	Expansion and Modernisation of Fire Services	5000
NDRF (Recovery and Reconstruction)	Resettlement of Displaced People affected by Erosion	1000
Sub-total (under NDRF)		**6000***
NDMF	Reducing the Risk of Urban Flooding in Seven Most Populous Cities	2500
NDMF	Catalytic Assistance to Twelve Most Drought-prone States	1200
NDMF	Managing Seismic and Landslide Risks in Ten Hill States	750
NDMF	Mitigation Measures to prevent Erosion	1500
Sub-Total (under NDMF)		**5950****
Grand Total		**11950**

**This amount of Rs. 6,000 crore shall be earmarked out of the total NDRF corpus of Rs. 54,770 crore.*

***This amount of Rs. 5,950 crore shall be earmarked out of the total NDMF corpus of Rs. 13,693 crore.*

8.97 We are of view that the objectives of all the earmarked allocations cannot be achieved unless the projects for which they are meant are implemented without undue delay, so that benefits accrue at the earliest to the target group. Therefore, such projects recommended by us under NDRF and NDMF should be sanctioned in such a manner that these can be completed within the award period of the Commission. **The Commission is also of the view that there shall be no spill-over for the liabilities committed for the projects sanctioned against earmarked allocation beyond the award period (2021-2026) of the Commission.**

Feasibility of District Disaster Response and Mitigation Funds

8.98 There have been consultations with State Governments in the past on the issue of separate district-level funds. State Governments have not supported the idea and suggested that the SDRF can take care of the requirements at the district level as well. Similarly, if the SDMF is constituted, it will take care of mitigation requirements at the district level.

8.99 There are many practical issues that will arise in the case of district-level funds. First, if a district does not experience any disaster, these funds will remain unspent, which will be an inefficient utilisation of resources, which are substantial. Second, the States would find it difficult to pool resources distributed across districts to respond to a disaster in a particular district or group of districts within that State. Third, the jurisdiction of the State-level funds and district-level funds, which are meant for the same purpose, will overlap and there will always be an issue about how the district-level funds would be spent differently from State-level funds.

8.100 While setting up district-level disaster funds does not seem to be a practical idea, we recommend that State Governments must allocate resources to districts for preparedness and mitigation on an annual basis. Empowering the district administration is essential for improving disaster preparedness at the local level. Without the devolution of resources, the district administration and local governments at the district, taluka and municipal levels would find it difficult to support disaster management preparedness and implementation. State Governments managing the entire fund at the State level is a practice which needs to change.

8.101 State Governments should consider allocating these resources following a methodology that they should evolve. In subsequent allocations, the State Governments may also consider the expenditure incurred by districts under these funds.

Empowering Panchayati Raj Institutions for Disaster Preparedness and Management

8.102 In the present situation, government agencies take sole responsibility for disaster preparedness, rescue, relief and reconstruction activities without providing adequate scope for local participation. Not only has this increased people's dependence on the government machinery but it has also diminished the capacity of local communities to cope with natural disasters. The lack of disaster preparedness and mitigation planning at the local level, especially at the Gram Panchayat level, gives rise to considerable problems in the management of disasters.

8.103 In the event of disasters like floods or earthquake, it takes a while for the full impact to be felt and necessary formalities to be completed before the District Disaster Response Force/ State Disaster Response Force/National Disaster Response Force teams can swing in to action. Meanwhile enormous damage has taken place and people have suffered tremendous loss and faced hardship. Additionally, round the year events like floods, lightning or even local level droughts do not trigger an intervention at the State or Union Government level. It is, therefore, necessary to build adequate capacity at the panchayat level. Thus, the current-top-down approach for disaster management should be suitably corrected and made more effective and efficient by empowering panchayats.

8.104 The Commission, therefore, considers the role of panchayats crucial and necessary in view of their proximity to the local community (including the weaker sections of society) and their ability to enlist people's participation on an institutionalised basis. Their involvement can provide a quick response to disaster events – whether natural or man-made – and also sensitise people to deal with them and minimise their dependence on the government for rescue and relief operations.

8.105 In fact, making panchayats the nodal agency for relief and rehabilitation will result in improved planning, coordination and monitoring, and this will make the overall relief and rehabilitation interventions better. The panchayati raj institutions can play a pro-active role in all stages of disaster management, covering prevention, mitigation, preparedness, response, restoration, rehabilitation reconstruction work.

8.106 The Commission believes that the involvement of panchayats will lead to enhanced effectiveness of activities like rescue operations and arranging temporary shelters; distributing immediate relief in the form of money, food grains, medical care, clothes, tents, vessels, drinking water and other necessities; restoration, rehabilitation and reconstruction efforts of damaged villages and towns; crop protection measures and livestock management; health and sanitation measures; organising health camps and so on. In addition, panchayats can undertake several risk mitigation activities far more effectively. Therefore, some mitigation activities out of the proposed indicative list of activities in Annex 8.2 should be left to the panchayats rather than being taken up by the Union or State Governments.

8.107 The Commission is of the view that State Governments should allocate some reasonable amount out of the allocation made for SDRF and SDMF to districts. These financial mechanisms would strengthen a decentralised approach to disaster management, although, allocating resources to 2,63,028 panchayati raj institutions, comprising 2,55,549 Gram Panchayats, 6,825 Block Panchayats and 654 District Panchayats across 739 districts could be a challenge

Reimbursement to the Ministry of Defence for Expenditure on Disaster Rescue and Response

8.108 The Ministry of Defence renders assistance to the civilian administration for disaster rescue and response. Reimbursement for this expenditure is a major issue of concern. **Normally, the procedure for reimbursement should be resolved between the Ministry of Defence and the Ministry of Home Affairs through mutual consultations. However, as the issue has been referred to the Finance Commission, we recommend the following options:**

(i) Once the requested operation concludes, the unit providing the services submits the bill to the State Government. Upon receipt of this bill, the State Government releases the amount to the local military authority. The State Government can then submit the bill to the Ministry of Home Affairs for reimbursement through the NDRF. The Ministry of Home Affairs then releases the assistance to the State Government as per the norms of assistance included in the guidelines. The armed forces get their reimbursement quickly, and if there is any delay, it is a matter between the State Government and the Ministry of Home Affairs.

(ii) The Ministry of Home Affairs, in consultation with the Ministry of Finance, advances an amount from the NDRF based on average expenditures during previous years to the Ministry of Defence. The total cost incurred on rescue and relief by the

Ministry of Defence is adjusted against this advance at the end of the financial year. This would ensure that the Ministry of Defence has the requisite resources for providing these services.

(iii) Once the requested operations conclude, the local military authority submits the bill to the State Government and gets it countersigned. It then submits the countersigned bill to the Ministry of Defence, which forwards it to the Ministry of Home Affairs, which in turn, will then release the amount through the NDRF to the Ministry of Defence.

8.109 **Both the Union ministries could agree upon any one of these options**.

Strengthening Institutional Capacities and Improving Guidelines

8.110 There is a pressing need to strengthen capacities and systems for managing the NDRF and SDRF at the Union and State levels. At present, funds are released to State Governments, which incur the expenditure, and financial flows are monitored in terms of release and utilisation of funds, with little emphasis on the purpose of utilisation.

Dedicated Capacity for Managing NDRMF and SDRMF

8.111 Given the magnitude of allocations for the NDRMF and SDRMF, **we recommend setting up a dedicated capacity within the Ministry of Home Affairs, Ministry of Finance or NDMA to manage these funds actively. This could be modelled on the lines of Mexico's FONDEN (Fund for Natural Disasters).** Such a capacity with a small staff would carry out the functions of budgeting, release, utilisation, reporting and audit. It would lead to an active management of funds and a greater accountability for allocation, expenditure and reporting. **Such a dedicated capacity would also be helpful in looking beyond the SDRMF and NDRMF and augmenting disaster funding through other sources.**

8.112 We also recommend setting up an online system for the release of NDRMF and SDRMF allocations. It will show the release of SDRMF allocations, expenditures and the outstanding balance for each State online. Such a system would improve the process of adjustment while funds from the Union Government are being released.

Two-stage Assessment for NDRF Allocation

8.113 **We recommend replacing the existing system of assessment of the damages caused by any natural calamity by a two-stage assessment. The first stage should be a smaller assessment, largely to ascertain humanitarian and relief needs. The second assessment should be inter-sectoral and more elaborate, and cover damage, loss and recovery needs.** The Union Government should consider introducing Post-Disaster Needs Assessment (PDNA) as defined in the manual on PDNA produced by the NIDM *(https://nidm.gov.in/PDF/pubs/pdna_manual_vol1.pdf)* as the standard methodology for carrying out the assessment following a disaster event.

Developing a Disaster Database

8.114 **We recommend setting up a disaster database as a special initiative. The database should have disaster assessments, the details of allocations and expenditure and preparedness and mitigation plans.** As insurance coverage expands in India, such a database would be extremely helpful in diversifying and improving insurance products and services.

Disbursing Assistance to Women Members of Households

8.115 Given the gender imbalances within households, **we recommend that cash assistance should be transferred to families in a way that women members of the household also get access to the money**. Housing and livelihoods assistance should also be targeted at women. This is an area which requires significant reforms in recognising the legal rights of women and their central role in ensuring the well-being of families.

Development of Guidelines

8.116 **If the new funding windows are being set up, they need to be supported through the development of guidelines.** Once the NDMF and SDMF are set up, they should follow the guidelines for mitigation. Similarly, States should also have guidelines for preparedness and capacity-building. A national recovery framework would guide the States in developing recovery plans. **The NDMA could develop the guidelines and frameworks and organise training around these enabling guidelines.**

NDMA's Leadership Role

8.117 The NDMA should take a leadership role in **developing and maintaining the financial system for disaster management and work closely with the SDMAs.** It needs to play an active role in setting up the Mitigation Fund and the Recovery and Reconstruction facility. These are new mechanisms which require support and nurturing. States need continuous guidance in setting up these windows and effectively using these resources. Without an active champion, these new windows will not be able to yield the expected results.

Outcome Framework

8.118 A greater accountability for the allocation and utilisation of SDRMF and NDRMF resources may be ensured through developing an outcome framework. Such a framework calls for States' commitments to achieve the Sendai Framework indicators. Some of these include reducing mortality, supporting community recovery and resilience and improving the quality and substance of disaster assistance. **An annual report at the national level may record all the allocations, expenditures, key achievements and results against various indicators developed for the implementation of SFDRR**. The ministries of Finance and Home Affairs and the NDMA may lead a mid-term review of the entire allocations and assess the impact of expenditures through different windows. **The contribution of these allocations to national and state capacities and resources may be evaluated against a set of indicators determined by the NDMA.**

Alternative Sources of Funding

8.119 **The resources provided by the SDRF and NDRF would be insufficient in many situations, and both the Union and State Governments would be constrained to mobilise disaster funding through other sources like reconstruction bonds, contingent credit/stand-by facility with international financial institutions, crowdfunding platforms and corporate social responsibility.** Developing these financial mechanisms and instruments ahead of a contingent situation would help governments identify and select more cost-effective options. **We recommend that the Union and State Governments look at these mechanisms and instruments carefully and consider accessing them when they are faced with disasters.**

Reconstruction Bonds

8.120 In a post-disaster situation, State Governments can issue reconstruction bonds, with a maturity of three to five years, with the approval of the Union Government. People would like to contribute to recovery and reconstruction efforts, and they would prefer to invest in bonds, for reasons other than just financial returns. So the State Governments could issue these bonds with a lower yield. However, the resources raised by these bonds should largely be spent on the construction of productive and social assets.

Contingent Credit/Stand-by Facility with International Financial Institutions

8.121 International financial institutions, the World Bank and the Asian Development Bank (ADB) have been among the most important sources of financial assistance for post-disaster recovery and reconstruction in India. Beginning in 1990, there have been at least nine recovery and reconstruction projects supported by the World Bank with an approximate cost of US$ 2.5 billion across different States.

8.122 If the World Bank and ADB have provided loans for recovery and reconstruction on a regular basis, there could be a long-term arrangement through which the lending operation could be made shorter and easier. Such an arrangement would ensure that if the cost of disaster exceeds a certain threshold, States could request loans from these institutions with necessary approvals. Such proposals may be considered taking into account the cost of borrowing, knowledge transfer and organisational help.

Crowdfunding Platforms for Disaster

8.123 Crowdfunding is playing an increasingly larger role in mobilising resources for disaster relief and recovery. Campaigns are launched on the internet to raise funds from the public. Communities and organisations with volunteers on the ground ascertain critical needs and create targeted donation pages. Within a matter of hours, a fundraising campaign is launched and a community of fundraisers takes shape.

8.124 Both the Union and State Governments need to recognise the role of crowdfunding and use it when disasters occur. While several crowdfunding platforms come up following a disaster event, a platform set up by the government with specified objectives and an assurance of transparency can attract public contributions on a more significant scale. Setting up a crowdfunding platform would require skills and expertise, which the governments could consider outsourcing. Identifying the right time for crowdfunding, setting up secure payment gateways and ensuring accountability and transparency are the most important considerations for the success of such an initiative. It is an area where both the Union and State Governments together should prepare operational guidelines.

Corporate Social Responsibility Window

8.125 The private sector has been supporting disaster relief and recovery for a long time. However, it can expand its contribution to disaster management by diversifying its engagement. In addition to relief and recovery assistance, it can support an event or campaign to raise awareness, mobilise donations from private sector employees and support crowdfunding. It can provide technological and innovation support for disaster management.

8.126 Incentives for a wider engagement of the private sector could include tax exemption to contributions to the NDRF and SDRF. The FC-XIV had made this recommendation, and this needs to be implemented. We reiterate these recommendations for providing tax exemption for such contributions. Schedule VII of the Companies (Corporate Social Responsibility Policy) Rules 2014 relating to corporate social responsibility states that companies may provide funds for the Prime Minister's Relief Fund or "any other fund set up by the Union Government or the State Governments for socio-economic development and relief". This rule could be used as an enabling provision for the contribution of the private sector to disaster funding windows. The corporate social responsibility rules and tax exemption incentives could be applied more innovatively to improve and diversify private sector support for disaster management.

Insurance and Risk Pooling

8.127 In the past, Finance Commissions have engaged with the provision of insurance for disaster-affected people. However, after due deliberations, they considered insurance as impractical on several grounds. They concluded that it would be cheaper for State Governments to directly provide disaster relief, as is being done presently, instead of going through an insurance intermediary.

8.128 While the Finance Commissions have correctly held these views and hence did not favour an insurance coverage for disasters to be extended to the entire population, there is a strong case for introducing insurance and risk pooling in niche areas, where essential conditions for market-based risk management instruments exist.

8.129 Insurance is feasible and practical when risk pools are large, the data on damage and loss is available and pay-outs could be estimated with reasonable accuracy. An expanded risk pool, which could exist at national or global levels, and quantified risks through a long-term database could be key to the feasibility of insurance services.

8.130 Furthermore, the use of insurance instruments is most efficient for natural perils, which occur infrequently but have high potential impact. The cost of response and recovery for frequently occurring natural hazards (occurring once every five to ten years, depending on the peril) are best absorbed by public funds such as the SDRF and NDRF. However, severe natural hazards occurring every ten to hundred years are best suited to be covered by an insurance policy or catastrophe bond.

8.131 In keeping with these principles, **we propose four insurance interventions, which need to be studied further by the NDMA and the relevant ministries for their feasibility.** These insurance interventions would provide an additional layer of protection to the people. These interventions do not seek to replace the existing public fund mechanisms; rather, they supplement these mechanisms and reinforce protection to the people. However, **these insurance mechanisms need to be introduced with due diligence in partnership with insurance companies**. The proposed insurance mechanisms are discussed below:

National Insurance Scheme for Disaster-related Deaths

8.132 An insurance programme for disaster-related deaths in India could be a feasible intervention for several reasons, and it confers clear benefits upon the families of those who have died. In India, disaster mortality as a proportion to the total population has reduced over the years. Due to improved early warning systems and preparedness as well as better communications, the annual mortality has seen a clear decline. The mortality is expected to decline further, which is a stated policy goal to meet the commitments expressed in the SFDRR.

8.133 On the strength of State-wise disaster mortality data, a national insurance scheme could be set up in partnership with an insurance company. State Governments may join the scheme by paying insurance premium based on their annual mortality. The Union Government could also contribute to the risk pool. Such insurance premium would generally be less than what State Governments pay by way of ex gratia assistance. In case of deaths, insurance companies would release the pay-out to the affected families at different stages such as one instalment immediately after the death, second instalment after five years, and again after ten years. The insurance company could also make monthly payments to affected families. The insurance scheme could be designed in a way that it essentially works as a social protection scheme. It does not increase the administrative burden on the government, as the responsibility for the pay-out lies with the insurance company.

Synchronising Relief Assistance with Crop Insurance

8.134 Farmers receive assistance in case of crop failure due to disaster events through two sources: SDRF/NDRF release and crop insurance pay-out. Discussions with State Governments showed that the assistance through government sources to a small and marginal farmer ranges from Rs. 3,000 to Rs. 10,000 on an average. While such assistance is helpful to farmers in times of distress, it is not a significant amount. However, if the pay-out from the crop insurance scheme is available at the same time, there is a substantive increase in total assistance. The PMFBY is an effective tool for compensating farmers for crop losses due to natural perils. Its effectiveness would increase considerably if the assessment and pay-out for crop failures is coupled with the SDRF/NDRF assistance.

8.135 We recommend that the Ministry of Agriculture and Farmers' Welfare should take steps through which the synchronisation between the SDRF/NDRF release and crop insurance pay-out could be improved. It would include a common assessment of the area under crops, improved loss assessment methodology and a prompt budget provision for crop insurance.

Risk Pool for Infrastructure Protection and Recovery

8.136 Infrastructure assets are prone to risks of hazards, causing massive damage and loss as seen in recent disasters. As governments are considered the ultimate insurer, there would generally be no insurance coverage for infrastructure protection. When disasters strike, the Union and State Governments release assistance for restoration of infrastructure. However, these resources generally prove inadequate for restoration and reconstruction. As the scale of infrastructure in India increases, the need for their protection would require a major commitment of resources.

8.137 Infrastructure protection could be supported through setting up a national risk pool for infrastructure in partnership with an insurance company. Infrastructure companies within the country could be encouraged to join the risk pool, which will yield the benefit of getting insurance protection against risks as well as the incentive for investing in improved standards and regulations. When there is damage and loss to infrastructure due to a natural hazard, the risk pool will pay for recovery and reconstruction.

8.138 Setting up a risk pool for infrastructure would be an innovative step and would require partnering with an insurance company. However, it would be more cost effective compared to other risk transfer solutions. As the Union Government has decided to set up the Coalition for Disaster Resilient Infrastructure, setting up a risk pool for infrastructure would be the first step towards seeking risk transfer solutions through market mechanisms.

Access to International Reinsurance for Outlier Hazard Events

8.139 **We recommend exploring an additional layer of protection against extreme hazard events through the international reinsurance market. Such a protection would have a parametric feature, aimed at low-frequency, high-intensity disaster events, and would provide an additional layer of protection through a global risk pool.** The index for such disasters could be defined in terms of magnitude and severity. For example, a great earthquake of magnitude 8 Mw or a super-cyclone could be the trigger for insurance pay-out.

8.140 It would be necessary to procure such an insurance protection through market quotes. Due to the low frequency of disasters and a global reinsurance pool, the premium for a parametric risk protection could be cost effective. International reinsurance companies can bid for protection, based on the magnitude of the hazard and pay-out. It is important that such an insurance protection is cost effective and should be cheaper than other forms of protection.

List of Calamities

8.141 This Commission, like its predecessors, has also examined the requests received from States for inclusion of a number of calamities in the eligible list of disasters for funding support from the SDRF and NDRF. The Commission feels that most of the calamities suggested by the States for inclusion in the list of notified calamities are State-specific or region- specific and can be difficult to quantify, as the scale of severity would vary from region to region.

8.142 The Commission considers that calamities like fire incidents and river and coastal erosion can be tackled efficiently through mitigation efforts. It has, therefore, made an allocation of Rs. 7,500 crore from the NDRMF for this. Of this allocation, Rs. 5,000 crore has been earmarked for strengthening fire services (para 8.77) and Rs. 2,500 crore has been set aside for mitigation measures to prevent erosion and resettlement of displaced people affected by erosion. (paras 8.93 and 8.95).

8.143 The Commission has observed that the list of notified disasters eligible for funding from SDRMF and NDRMF covers the needs of the States to a large extent and thus did not find much merit in the request to expand its scope.

8.144 Man-made disasters and technological disasters (chemical and industrial disasters including radioactive contamination, railway/air accidents), including public health disasters such pandemics/epidemics, which are caused by either negligence/oversight or faulty equipment or even bad weather, may have low chances of occurrence but require high level of funding. The Commission feels that financing of preventive and relief measures for such disasters should be left out of the SDRMF and NDRMF. These disasters may continue to be taken care of by the respective nodal ministry/department. The Union Government may consider financing disaster relief in respect of such disasters as a one-time temporary arrangement from the NDRMF for initial mitigation, as was done at the time of the Covid-19 outbreak provided that funds available with the respective designated ministry/department are not sufficient.

Accounting Norms and Standards

8.145 Mandates relating to operating of the disaster-related funds require the States to transfer their matching share towards the SDRF along with the Union's share received by them. However, some of the States do not make transfers into the public account maintained by them in a timely manner. This results in inadequate funds being available with the States to tackle disasters of a severe nature and they seek additional central assistance (ACA) from the NDRF. States are, therefore, advised to make timely transfers of their matching share under SDRF and SDMF. It is further suggested that since SDRF and SDMF (together now called SDRMF) are non-lapsable corpuses, any balance left under these heads from one Finance Commission award period should be carried forward to the award period of the next Commission.

8.146 The Commission also considers that since the disaster response fund and mitigation fund are different identities, there should be separate accounting heads for each under SDRMF and NDRMF in order to utilise allocation made for response and mitigation efforts. Therefore, the Commission suggests that the Ministry of Home Affairs, in consultation with Department of Expenditure in the Ministry of Finance, take appropriate action to open new accounting heads while formulating the operational guidelines and norms for the SDRMF and NDRMF. Accordingly, sub major heads corresponding to minor heads under MH '1601 - Grants-in-aid from Central Government', MH '2245 - Relief on account of Natural calamities', MH '3601-Grants-in-aid to State Governments', MH- '8121- General and other Reserve Funds' under Reserve Funds Bearing Interest, and MH '8235-General and other Reserve Funds under Reserve Funds Not Bearing Interest should be opened before first instalment of 2021-22 for SDRMF and NDRMF is released. The CGA and Department of Expenditure should ensure that these accounting norms are adhered to. The CAG may appropriately review the adherence to these prescribed accounting practices.

8.147 As per the current practice, 50 per cent of the available balance under SDRF as on April 1 of a financial year, as reported by the Accountant General of the State, is adjusted while calculating the requirement of ACA from the NDRF during severe calamities. However, this does not capture the contribution (Union as well as States share) made to the SDRF until that period while calculating ACA under NDRF. The contribution made to the SDRF in that financial year is also meant to ensure that States have adequate funds under the SDRF for tackling severe disasters. The Commission is, therefore, of the view that the balance as on April 1 of a financial year and Union and States' contribution of their respective shares made to the SDRF until the latest date should be adjusted while calculating ACA under NDRF and the first charge should be on the SDRF during a severe disaster.

Summary of Recommendations

(I) The ratio of contribution by Union and States to the State-level allocations for disaster management recommended by FC-XIII should be maintained. Thus, States are to contribute 25 per cent of funds of SDRF and SDMF except the NEH States which shall contribute 10 per cent, and the rest is to be provided by the Union Government.

(para 8.34)

(ii) Mitigation Funds should be set up at both the national and State levels, in line with the provisions of the Disaster Management Act. The Mitigation Fund should be used for those local level and community-based interventions which reduce risks and promote environment-friendly settlements and livelihood practices.

(para 8.43 and 8.46)

(iii) Allocation of disaster management funds to SDRMFs should be based on factors of past expenditure, area, population, and disaster risk index (which reflect States' institutional capacity, risk exposure, and hazard and vulnerability respectively). Assuming an annual increase of 5 per cent, we arrive at the total corpus of Rs.1,60,153 crore for States for disaster management for the duration of 2021-26, of which the Union share is Rs. 1,22,601 crore and States share is Rs. 37,552 crore.

(para 8.51, 8.52 and 8.53)

(iv) Total States allocation for SDRMF should be subdivided into funding windows that encompass the full disaster management cycle. Thus, the SDRF should get 80 per cent of the total allocation and the SDMF 20 per cent. The SDRF allocation of 80 per cent should be further distributed as follows: Response and Relief – 40 per cent; Recovery and Reconstruction – 30 per cent; and Preparedness and Capacity-building – 10 per cent. While the funding windows of the SDRF and SDMF are not interchangeable, there could be flexibility for re-allocation within the three sub-windows of SDRF.

(para 8.54)

(v) The allocation for the NDRMF should be based on expenditure in previous years. Assuming an annual increase of 5 per cent, the total national allocation for disaster management is estimated to be Rs. 68,463 crore for the duration of 2021-26.

(para 8.59)

(vi) The allocation for the NDRMF should also be subdivided into funding windows similar to that of States' allocation for disaster management. Hence, the NDRF should get 80 per cent of the total allocation for the NDRMF, with further division into 40 per cent for Response and Relief, 30 per cent for Recovery and Reconstruction and 10 per cent for Preparedness and Capacity-building. The NDMF should be allotted 20 per cent of the total allocation for the NDRMF. If required, the Ministry of Home Affairs may examine the need for amending the Disaster Management Act to create three sub-windows within the NDRF. While the funding window of NDRF and NDMF should be maintained, there could be flexibility for re-allocation within these sub-windows.

(para 8.60 and 8.61)

(vii) To discourage excessive and unsubstantiated demands from States, all Central assistance through the NDRF and NDMF should be provided on a graded cost-sharing basis. States should contribute 10 per cent for assistance up to Rs. 250 crore, 20 per cent for assistance up to Rs. 500 crore and 25 per cent for all assistance exceeding Rs. 500 crore.

(para 8.63)

(viii) A Recovery and Reconstruction Facility should be set up within the NDRF and SDRF. Assistance for recovery and reconstruction is generally a multi-year programme, and the assistance, shared between the Union and States, needs to be released annually against expenditures and only as a percentage of total cost.

(para 8.68 and 8.69)

(ix) State Governments need to have essential disaster preparedness to respond effectively to disasters. Their institutions and facilities must be equipped and well-functioning to meet the exigencies of a situation. The preparedness and capacity-building grants could be used to support the SDMAs, SIDMs, training and capacity-building activities and emergency response facilities. A similar window of preparedness and capacity-building should be made available within the NDRF, which could be used to support national agencies.

(para 8.70 and 8.73)

(x) Major capital works required for proper upstream river basin management (to mitigate annual flood disasters caused by river erosion) with gestation periods of ten to fifteen years cannot be accommodated through Finance Commission award. Therefore, we recommend that such projects should be considered as national priority projects. Only such holistic projects can help address flood mitigation properly. A piecemeal approach will simply result in yearly washing away of river embankments.

(para 8.92)

(xi) There should be six earmarked allocations for a total amount of Rs. 11,950 crore for certain priority areas, namely, two under the NDRF (Expansion and Modernisation of Fire Services and Resettlement of Displaced People affected by Erosion) and four under the NDMF (Catalytic Assistance to Twelve Most Drought-prone States, Managing Seismic and Landslide Risks in Ten Hill States, Reducing the Risk of Urban Flooding in Seven Most Populous Cities and Mitigation Measures to Prevent Erosion).

(para 8.96)

(xii) A streamlined system of payment to the Ministry of Defence by the Ministry of Home Affairs should be institutionalised through mutual consultations. Three options for the system of payment have been outlined.

(para 8.108)

(xiii) In order to strengthen institutional capacities, a dedicated capacity should be set up to supervise the NDRMF and SDRMF and augment disaster funding through other sources. In addition, a disaster database should be developed to help assess the impact of expenditures on different aspects of disaster management. Other interventions such as disbursing assistance to women members of households will make disaster management more effective and efficient. NDMA, as a leading agency in disaster management, needs to be proactive and collaborate with States in pushing the agenda of reforms in disaster management.

(para 8.111, 8.114, 8.115 and 8.117).

(xiv) To improve and streamline the access of Central assistance to the states, the existing system of assessment of the damages caused by any natural calamitiesshould be replaced by a two-stage assessment – an initial humanitarian needs assessment for response and relief assistance and a post-disaster needs assessment (PDNA) for recovery and reconstruction needs.

(para 8.113).

(xv) All the new funding windows need to be supported through development of guidelines, the drawing up of which should be led by the NDMA. (para 8.116)

(xvi) An annual report at the national level may record all the allocations, expenditures, key achievements and results against various indicators developed for the implementation of the SFDRR. The contribution of these allocations to national and State capacities may be evaluated against a set of indicators determined by the NDMA.

(para 8.118)

(xvii) In the event of SDRMF and NDRMF assistance falling short of the required assistance, the Union and States should have recourse to other financial instruments. These instruments are identified as reconstruction bonds, contingent credit/stand-by facility with international financial institutions, crowdfunding platforms and corporate social responsibility.

(para 8.119)

(xviii) Insurance mechanisms, which act as a social safety net and supplement the existing financial mechanisms, need to be introduced in partnership with insurance companies after due diligence is done. These mechanisms are: national insurance scheme for disaster-related deaths, synchronising relief assistance with crop insurance, risk pool for infrastructure protection and recovery, and access to international reinsurance to the outlier hazard events

(para 8.131 and 8.139).