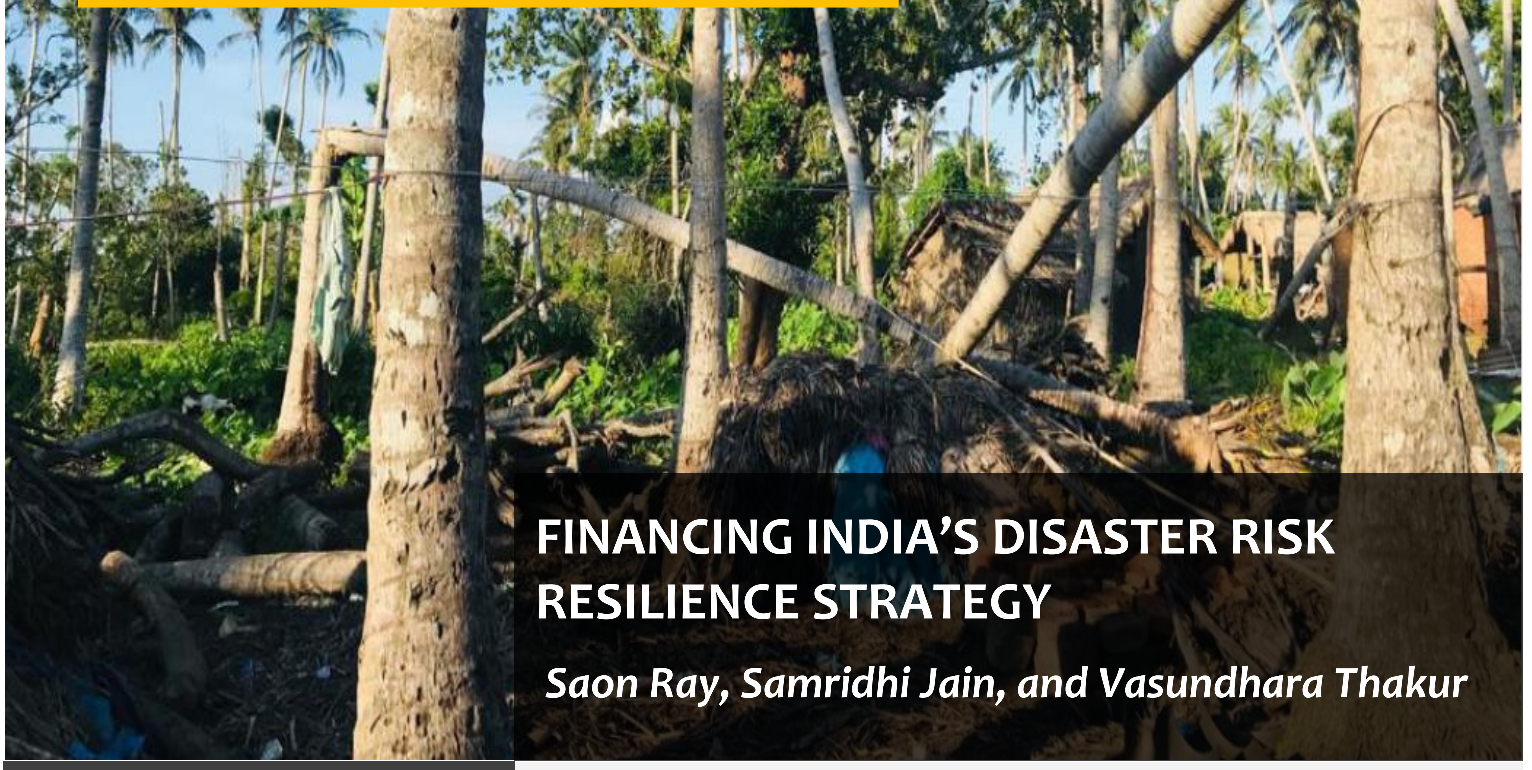
Working Paper 404 | February 2021



FINANCING INDIA'S DISASTER RISK RESILIENCE STRATEGY

Saon Ray, Samridhi Jain, and Vasundhara Thakur

Key Highlights

- This paper emphasises the importance of DRR in dealing with natural catastrophes by integrating DRR and climate change adaptation strategies for the purpose of mainstreaming them into centrally sponsored schemes. It briefly talks about synergising risk reduction efforts with sustainable development goals through the Sendai Framework.
- In this paper, we try to cover a whole range of polices and schemes that have been undertaken in India to finance disaster risk resilience (DRR).
- It reflects briefly on the gaps since the advent of these policies and suggests methods for financing based on experiences of other countries. Then the focus of the paper shifts towards insurance and reinsurance mechanisms used in other countries for financing these catastrophes.
- It underlines a concept that resilience can be attained only through building better infrastructure for reducing shocks and these instruments can be financed by introducing new financial tools which deal with climate change from its very inception.

EXECUTIVE SUMMARY

One of the most discussed issues of modern times is the problems related to the scarcity of funds in dealing with the increasing catastrophic events. Around the globe, increased frequency of disasters has been observed: in 2000 it was 991, while in 2010 it was 1100.

In the last two decades, India has experienced an increased frequency and intensity of disasters whose economic impact has caused great monetary losses. In the Indian context, the pandemic was coupled with floods, cyclones, and earthquake shocks in different parts of the country. This paper analyses India's overall approach in dealing with disasters.

BACKGROUND

Interlinkages between DRR and CCA

Resilience strategies call for a collaborative effort for DRR and Climate Change Adaptation (CCA) in combating disasters, which would help in reducing people's vulnerability to rising insecurities. IPCC defines DRR as a policy goal and a strategy employed for anticipating future disaster risk, which works with mechanisms to reduce the exposure, vulnerability, and loss, thereby improving the resilience, while CCA is a strategy that accommodates both human and natural systems. Both DRR and CCA involve multiple stakeholders and different perceptions about risks.

Interlinkages between DRR and SDGs

DRR mainstreaming into CCA and the shift of focus began in 2005, when the Hyogo Framework for Action for DRR was endorsed by 168 countries, including India. This was followed by its successor, the Sendai Framework which

was adopted for 2015-2030 in the third UN World Conference on Disaster Risk Reduction by India along with 187 countries.

The Sendai Framework for Disaster Risk Reduction (SFDRR), adopted in March 2015, was in many ways a game changer and continues to be the guiding principle for disaster risk reduction policies and efforts to improve resilience.

One of the most noteworthy aspects of SFDRR is that the framework synergises risk reduction efforts with sustainable development goals and Post 2015 climate change agreement under the UNFCCC. Another notable aspect of the Sendai Framework is that it promotes resilience as a priority and highlights the primacy of state action in DRR efforts.

DISASTER RISK FINANCING IN INDIA

A combination of national experience, international interactions, and global initiatives through the 1990s to 2005 acted as a catalyst for a shift in India's perspective on disaster management. While much progress has been made in most of the sub domains, disaster risk financing is still centred on post disaster relief and recovery.

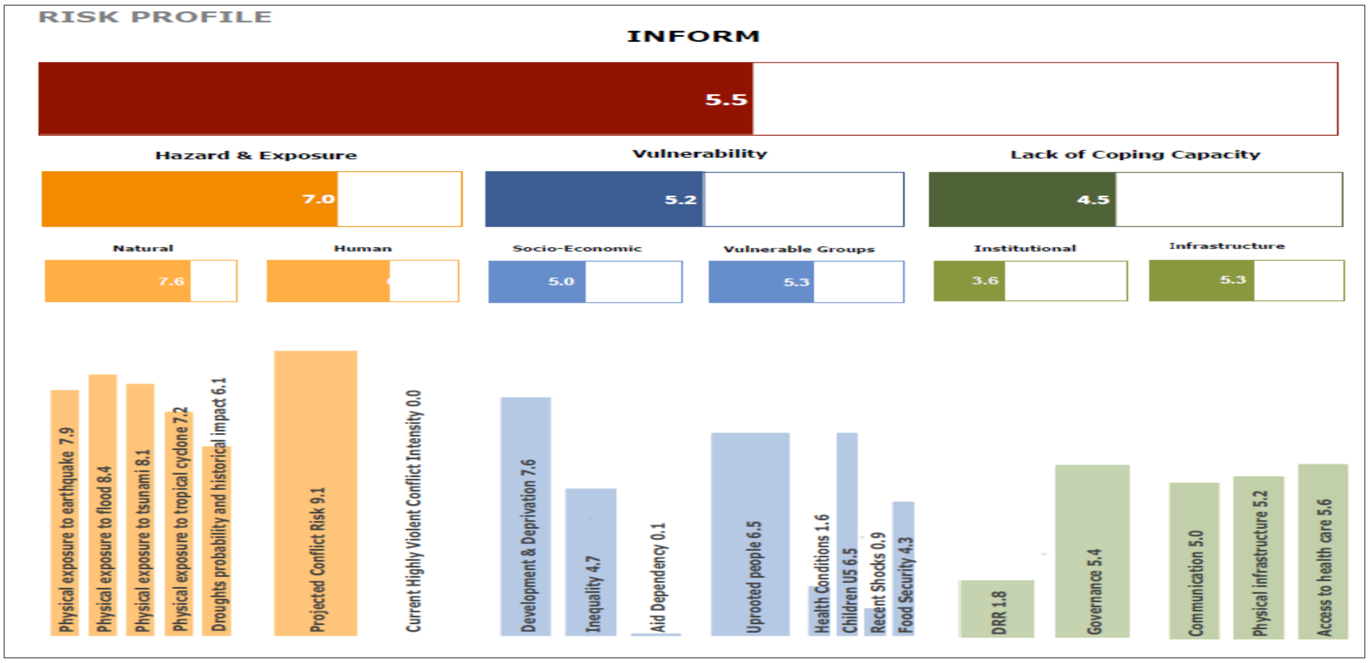
As recovery and relief becomes the focus, disaster mitigation and resilience building efforts tend to remain dispersed and uncoordinated. The view is that the purpose of mitigation is currently served by centrally sponsored schemes/Central Sector Schemes such as the Pradhan Mantri Krishi Sinchai Yojana, the Krishonnati Yojana, the National Mission on Sustainable Agriculture, the MGNREGA, Major Irrigation projects, NamamiGange-National Ganga Plan, River Basin Management, the National River Conservation Plan, and Water Resource Management (PIB, 2016). Additionally, the Ministry of Finance has made a provision of 10 per cent of total outlay for all CSS schemes except

Table 1: Targeted schemes in India

Name of the Scheme	Year of initiation	Objectives	Organisational Head
National Cyclone Risk Mitigation Project (NCRMP)	2011	• Mitigating the effect of cyclones in India. • Two phases Phase 1 - Odisha and Andhra Pradesh Phase 2 - Goa, Gujarat, Karnataka, Kerala, Maharashtra, and West Bengal • Four major components 1. Early warning dissemination system 2. Cyclone risk mitigation infrastructures 3. Providing technical assistance for cyclone hazard mitigation 4. Project management and implementation support	National Disaster Management Authority, National Institute for Disaster Management (NIDM).
Flood management and flood forecasting programmes	Eleventh Five Year Plan	• Financing the resilience activities to reduce the losses from floods • Work related to river management, flood control, anti-erosion, drainage development, flood proofing works	Ministry of Water Resources
Integrated Coastal Zone Management Programme	2004	• Four components I. National Coastal Management Programme II. ICZM-West Bengal III. ICZM-Orissa IV. ICZM-Gujarat • Building national capacity for implementation of a comprehensive coastal management approach • Aim of rehabilitation of 223 existing dams and strengthening the system	Ministry of Environment and Forests (MoEF)/ Society of Integrated Coastal Management (SICOM)
Disaster Management Support programme		• Natural Disasters - Monitoring/Damage Assessment • National Database for Emergency Management (NDEM) • VSAT based VPN for emergency communication • Strengthening Early Warning Systems for tsunami, floods, cyclone, drought, landslides • Development of Hydro-met. networks, DSS • Capacity Building on DMS Exclusive Training Programme • Key Developmental Efforts - Airborne SAR, communication equipment, support to IOTWS, constellation of EO satellites	ISRO - DMS Decision Support Centre (DSC) at NRSC in association with Nodal Agencies MHA, MOA, Cabinet Secretariat, NDMA, State Agencies, NGOs
Tsunami and Storm Surge Warning System	2007	• Will issue alerts for the killer waves within 30 minutes of an earthquake • Enables early warning centre to disseminate warnings to the MHA, as well as to the state emergency operations centres • Gives information about magnitude, location, and depth at which an earthquake occurs	Ministry of Earth Sciences Department of Science and Technology Department of Space and the Council of Scientific and Industrial Research

Source: Authors' compilation

Risk Profile of India



Source: INFORM country risk profiles, http://www.inform-index.org

those emanating from legislation (PIB, 2016). A few targeted schemes which differ from the above approach also exist. Table 1 captures some of these schemes.

FINANCIAL PROTECTION AGAINST NATURAL DISASTERS – NOTABLE EXAMPLES FROM COUNTRIES

The paper elucidates some of the policy steps adopted all around the world for financing disasters. It discusses different insurance and reinsurance programmes that were implemented globally and helped to create a layer of resilience over recurrent disasters. The discussed examples span across state sponsored insurance programmes, industry led insurance programmes, reinsurance programmes and catastrophe pools, parametric insurance products, catastrophic bonds and insurance linked securities, and multilateral disaster risk finance initiatives.

INSURANCE AND REINSURANCE MARKETS IN INDIA

A well-developed insurance sector is critical for cushioning the financial impact of natural disasters. Catastrophe insurance is an underdeveloped sector whose importance has not been realised yet. Further, the reinsurance market for catastrophic losses is also underdeveloped in India. Reducing or controlling catastrophe exposure is yet to be a significant driver in reinsurance buying decisions for Indian insurance companies.

CROP INSURANCE IN INDIA

The only vertical which is fast evolving and improving the coverage is crop insurance. Though the system of crop insurance was in place since 1972, it was not successful in risk mitigation owing to lack of transparency, high premiums, delay in conducting crop cutting experiments, and non-payment/delayed payment of claims to farmers. Pradhan Mantri Fasal Bima Yojana (PMFBY) brought in improved features to counter such issues. Considering the concerns that arose in the first two years of implementation, efforts are underway to improve the programme.

CONCLUSION

The paper highlights the gaps in the policy formulations and their implications in our country. Risk financing strategy in India is still largely dominated by relief and recovery. Therefore, disaster policies need to shift towards mitigation rather than just focusing on recovery. Various tools and mechanisms for successful pooling of resources have been suggested by explaining briefly the financing done in various countries.

This paper provides a range of products and tools for beginning dialogue focusing on financing DRR and shifting attention towards serious repercussions from climatic changes. The findings of this paper suggest that India can facilitate the process of catastrophe bonds and insurance linked securities in financial markets which are less risky than capital bonds and have greater pay-outs.

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NASA satellite image of Cyclone Fani

Source: Process Document of Extremely Severe Cyclonic Storm FANI, OSDMA

References:

PIB. 2016. *National Disaster Mitigation Fund. Accessed from* https://pib.gov.in/newsite/PrintRelease.aspx?relid=148287

Ray, S., Jain, S., and Thakur, V. 2019. *Financing resilience against natural disasters. Report. September. Indian Council for Research on International Economic Relations, New Delhi.*

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