



# Pakistan's Disaster Resilience

*Pakistan's susceptibility to a multitude of disasters underscores the urgent need for comprehensive disaster risk management strategies. How NDRMF is addressing the challenge?*

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Pakistan stands at the crossroads of some of the highest disaster risk levels globally, with consistent ranking as the sixth most vulnerable country according to the German vulnerability risk index. This vulnerability stems from the nation's exposure to a diverse range of disasters, including floods, heatwaves, tropical cyclones, and droughts. These risks are further compounded by socio-economic vulnerabilities, particularly multidimensional poverty.

In 2022, Pakistan experienced devastating floods that continue to inflict ongoing damage.

Unprecedented climate-induced rains submerged one-third of the country for an extended period, affecting over 33 million people primarily in the Sindh and Baluchistan provinces.

The toll was staggering, with nearly 1,739 lives have been lost, 12,867 people have been injured. Among the hardest hit were 33 million—one in seven people—have been affected, including nearly 8 million

displaced from their homes, still struggling to rebuild their lives. Over a year after the disaster, its far-reaching implications persist.

This catastrophe catalyzed a long-overdue national conversation regarding Pakistan's exposure to an array of hazards and the likelihood of their exacerbation in the years and decades ahead. Research and data have unequivocally

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confirmed that climate change disruptions imperil food and energy security, strain public health systems, drive massive human displacement due to high-impact weather events, and underscore the capacity limitations of national institutions in disaster preparedness, risk reduction, and management, especially in the face of increasingly frequent and severe disasters.



The reality of climate change is irrefutable. Escalating concentrations of greenhouse gases in the atmosphere have significantly disrupted natural systems, resulting in inevitable climatic shifts unless urgent transformative changes towards low-carbon emissions pathways are undertaken.



Even with these changes, societies must adapt, and economic systems need reengineering to mitigate impacts. Given the time constraints for transformative actions, intensifying climate-induced disasters are becoming an undeniable certainty.

Geographically situated within a temperate zone, Pakistan's erratic climate variability brings forth extreme weather conditions, leading to a cycle of successive disasters that amplify inherent hazards and associated risks. Addressing this challenge demands comprehensive disaster risk reduction and risk management policies, strategies, and adequately empowered national institutions.

Experience and best practices from around the world emphasize that disaster risk reduction starts with risk identification. The Sendai Framework for Disaster Risk Reduction (2015-2030) asserts that understanding disaster risk

hinges on hazard identification, exposure and vulnerability analysis, and subsequent risk identification, forming the bedrock for effective risk-based planning.

This approach necessitates clear linkages from identified vulnerabilities to risks, with tailored plans to mitigate those risks. Moreover, it highlights the importance of establishing necessary safeguards to manage risks that are beyond mitigation due to climatic and other external factors beyond human control, aiming to minimize adversarial impacts as much as possible.

Central to a comprehensive disaster risk management (DRM) strategy for countries like Pakistan is a two-pronged approach: investment in

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mitigation and prevention measures for disaster risk reduction, and integration of climate adaptation actions with economic and financial risk management strategies.

The National Disaster Risk Management Fund (NDRMF), a federal government fund, is deeply engaged in various disaster risk reduction initiatives across Pakistan, such as flood protection, early warning systems enhancement, rescue services strengthening, and disaster-resistant public infrastructure development.



# FINANCIAL DISBURSEMENT HIGHLIGHTS







These interventions have proven effective in managing and mitigating disaster risks. However, their efficacy in the face of increasingly severe risks is limited without simultaneous climate adaptation efforts and strategies to curtail economic and fiscal impacts on both public finances and the population at large.

The NDRMF's strategic and operational approach emphasizes that disaster resilience goals cannot be achieved without robust integration of climate adaptation into overall development planning, alongside economic and financial risk management strategies.

This comprehensive approach is founded on the principle that not every natural hazard must culminate in a disaster, and not every disaster must lead to an intense economic shock for

communities and governments. This necessitates a harmonized disaster risk management and disaster risk financing strategy, aimed at minimizing physical damages to public and private assets while mitigating financial and economic shocks. An effective disaster risk financing strategy should be operational prior to disasters, integrated into public finance systems, and encompass risk retention and transfer mechanisms aligned with prevailing legal and policy frameworks.

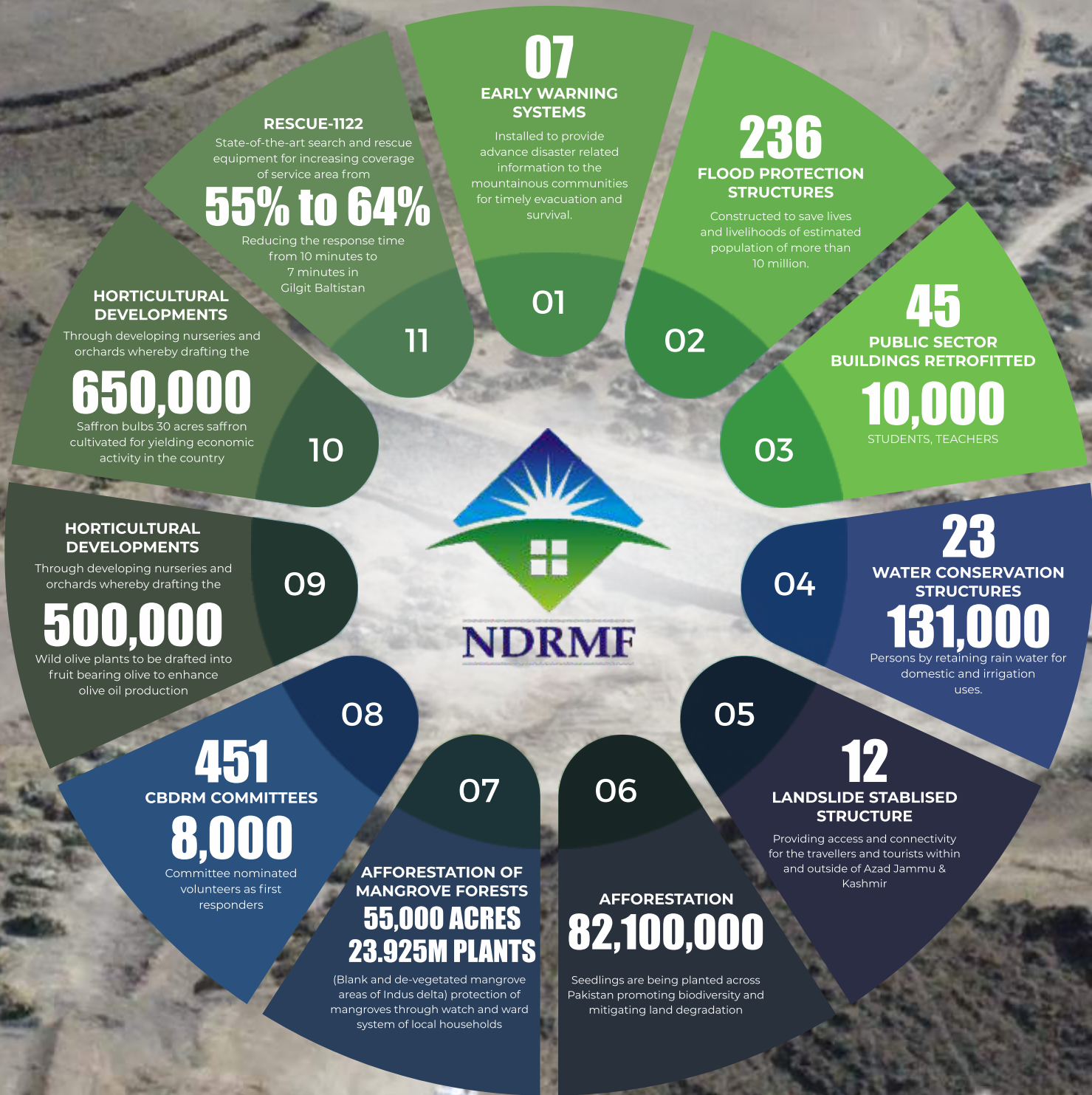
In the context of Pakistan, such a strategy must include financing mechanisms for critical public infrastructure and economically significant privately owned assets, such as crops. Currently, the use and integration of such instruments are insufficient, forcing the government to bear the burden of relief and loss support after each natural disaster, which strains public finances.

A disaster risk financing strategy, along with operational financial instruments, assumes immense significance in such scenarios. Various approaches and instruments within this strategy include building a Reserve Fund, establishing fiscal buffer zones, adopting financial pooling methods, and implementing viable insurance solutions. It's astonishing that insurance, a potent instrument for risk mitigation and transfer, remains underutilized in Pakistan, with less than 1% penetration. Even crop insurance, crucial given the agriculture sector's vulnerability to climate change impacts, faces structural challenges preventing its success. Similarly, insurance for public infrastructure remains limited.

The National Disaster Risk Management Fund (NDRMF) plays a pivotal role in disaster risk financing at the national level. Its mission is to sustainably



# NDRMF INTERVENTIONS





reduce the financial fallout of disasters on public finances and development budgets, all while ensuring continued progress, fiscal stability, and societal well-being.

To fulfill this mission, the NDRMF adopts an integrated and holistic approach that encompasses disaster preparation and management, safeguarding development progress, fiscal stability, and well-being. To achieve this, a series of activities and interventions have been initiated, including the creation of the National Disaster Risk Financing Strategy, developed in collaboration with the Space & Upper Atmosphere Research Commission (SUPARCO). This strategy, grounded in forecast-based financing, incorporates the National Catastrophic model developed for Pakistan.

The model provides quantitative insights into expected loss levels for diverse hazard events, bridging the gap between the insurance industry and disaster management authorities. It serves as the foundation for shaping and implementing Pakistan's National Disaster Risk Financing strategy and determining appropriate pricing for disaster risk financing solutions.



The National Catastrophic model also positions the NDRMF as a hub for disaster and climate risk modeling knowledge, granting access to science-based information and data for the government, private sector, and other stakeholders. This service addresses a significant knowledge gap in policymaking and raises awareness about these critical issues.

Over the next five to ten years,

the NDRMF plans to expand its mandate and strategic objectives, positioning itself as a premier government entity and fund offering technical, financial, and knowledge-based support for climate action, disaster risk management, and the design and implementation of innovative and viable projects. With its institutional expertise and commitment to diversification and innovation, the NDRMF is uniquely poised to spearhead resilience-building efforts in Pakistan.

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Pakistan's susceptibility to a multitude of disasters underscores the urgent need for comprehensive disaster risk management strategies. The National Disaster Risk Management Fund's multifaceted approach to disaster risk reduction and risk financing stands as a beacon of hope in enhancing the country's resilience. By effectively integrating climate adaptation, economic stability, and innovative strategies, the NDRMF plays a crucial role in steering Pakistan towards a more resilient future.



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# GEOGRAPHICAL FOOTPRINT

NDRMF portfolio coverage is well spread out into all regions of Pakistan, about 50% of the vulnerable districts, referred as high priority districts according to NDMP.

