

Essay Writing

Disaster Management in Pakistan - Challenges and Way Forward

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Essay

Disaster Management in Pakistan Challenges and Way Forward

Disasters do not destroy nations, they expose their weaknesses. In Pakistan, every flood, earthquake, or drought has not only devastated communities but also revealed the cracks in governance, preparedness and public awareness. From the catastrophic 2005 earthquake to the historic floods of 2022 that submerged one-third of the country, Pakistan's vulnerability to natural and man-made disasters has been a recurring national tragedy. As climate change intensifies and governance remains reactive rather than preventive, Pakistan's disaster management system faces severe challenges that threaten lives, livelihoods, and long-term development. To overcome these, a proactive, coordinated, and technology-driven approach is essential for a safer and

more resilient Pakistan.

Pakistan is among the top ten climate vulnerable countries in the world, despite contributing less than 1% to global greenhouse gas emissions. Its geographical location, diverse topography, and socio-economic conditions make it prone to multiple hazards — earthquakes in the north, floods in the plains, droughts in Balochistan and Sindh and cyclones along the Makran coast. The 2005 earthquake claimed over 73,000 lives, while the 2010 floods affected more than 20 million people, washing away homes, crops and infrastructure. More recently, the 2022 floods were declared one of the worst in Pakistan's history, displacing nearly 33 million people, killing over 1,700 and causing economic losses exceeding USD 30 billion according to UNDP and World Bank reports. These disasters show that while nature's fury is inevitable, the scale of human suffering often results from inadequate planning and institutional fragility.

Pakistan's disaster management framework formally evolved after the 2005 earthquake with the creation of the National Disaster Management Authority (NDMA) in 2007 under the National Disaster Management Ordinance. The NDMA was tasked with coordination, policy formulation and disaster risk reduction (DRR) at the national

level, supported by Provincial Disaster Management Authorities (PDMAs) and District Disaster Management Units (DDMUs). Despite this structure, disaster response in Pakistan remains largely reactive. Early warning systems are weak, inter-agency coordination is fragmented, and community level preparedness is minimal. For instance, during the 2022 floods, communication gaps between NDMA and provincial departments led to delayed evacuations and misallocation of relief goods. Similarly, during the 2021 snowstorm in Murree, lack of timely alerts and poor management caused preventable deaths.

A major challenge lies in institutional inefficiency and lack of coordination. While NDMA serves as the central authority, its powers and resources are limited. Provincial and district bodies often work in isolation, leading to duplication of efforts or gaps in response. Bureaucratic red tape slows down decision-making, and disaster funds are often released too late to be effective. The absence of a permanent disaster risk financing mechanism forces the government to rely on foreign aid and relief campaigns. Moreover, the overlapping jurisdictions of NDMA, the Ministry of Climate Change, and

provincial governments lead to confusion during crises.

Another critical issue is insufficient data and weak early warning systems.

Pakistan lacks modern weather forecasting technologies, real time hazard mapping and community-level risk assessments. While the Pakistan Meteorological Department issues flood and rainfall alerts, they often fail to reach remote populations due to communication barriers and limited outreach. The lack of digital integration among NDMA, Supreco, and the Pakistan Space and Upper Atmosphere Research Commission further weakens data-driven decision-making. As a result, disaster preparedness plans are based on outdated statistics rather than predictive models.

Urban vulnerability is another growing concern. Rapid and unplanned urbanization has increased exposure to disasters. Cities like Karachi, Lahore and Islamabad face high risks of urban flooding due to encroachment on drainage systems, poor waste management, and inadequate infrastructure. The 2020 Karachi Monsoon disaster illustrated how clogged drains, illegal constructions

and poor municipal governance can transform heavy rainfall into a humanitarian crisis. Furthermore, the unchecked construction in earthquake-prone regions violates building codes, making cities like Muzaffarabad and Islamabad highly susceptible to future seismic disasters.

Climate change acts as a force multiplier, intensifying both the frequency and severity of disasters. The 2022 floods were largely attributed to glacial melt, erratic monsoons, and changing weather patterns linked to global warming. Pakistan's northern glaciers, particularly in Gilgit Baltistan, are melting at unprecedented rates, raising the risk of **Glacial Lake Outburst Floods (GLOFs)**. The United Nations has warned that over 3000 glacial lakes in Pakistan are on the verge of bursting, endangering millions. Meanwhile, droughts in Sindh and Balochistan have worsened food insecurity, forcing mass migration from rural areas. These phenomena underline the urgent need for climate adaptation strategies within Pakistan's disaster management policies.

Despite these challenges, Pakistan has made some **progress** in recent years. NDMA, with the support of international organisations like **UNDP** and **JICA**, has

launched initiatives for community-based disaster risk management, school safety programs, and disaster-resilient infrastructure. The **National Adaptation Plan (2023)** integrates disaster risk reduction into broader climate policies, emphasizing resilience, early warning systems and sustainable water management. Moreover the **National Flood Protection Plan-IV** aims to strengthen embankments and improve drainage networks across flood prone areas. However, these initiatives remain underfunded and poorly implemented due to political instability, limited fiscal space and lack of long term vision.

To move forward, Pakistan must transition from reactive relief-based responses to a **proactive risk-reduction model**. First, institutional reforms are essential. NDMA must be granted greater autonomy, funding and enforcement power to coordinate national responses effectively. Provincial and district authorities should be strengthened with trained staff, dedicated budgets and modern communication tools. Establishing a **National Emergency Response Fund** would ensure timely availability of resources for relief and rehabilitation. Second, investment in **technology and data driven systems** is crucial. Pakistan should develop real time hazard monitoring

through satellite data, GIS mapping and mobile based alert systems. Collaboration with Suparco and China's BeiDou navigation system could enhance early warning accuracy.

Third, public awareness and community resilience must be prioritized. Disaster management cannot succeed without local participation. Introducing disaster education in school curricula, conducting regular mock drills and empowering local councils can significantly reduce vulnerability. Media and digital platforms can also be utilized for this.

Fourth, urban planning and environmental protection should be integral to disaster prevention. Strict enforcement of building codes, restoration of natural waterways, reforestation and regulation of land use in vulnerable zones can mitigate risks.

The "10 Billion Tree Tsunami" project if sustained transparently, can reduce soil erosion and strengthen ecological resilience against floods and landslides.

Finally, International Cooperation must be leveraged. Pakistan can benefit from partnerships with ASEAN, SAARC Disaster Management Centre, and the UN's Framework for Disaster Risk reduction. Learning from models like Japan's community-based resilience and

Bangladesh's cyclone shelters can guide local adaptation strategies.

In **Conclusion**, disasters in Pakistan are not merely acts of nature, they are amplified by human negligence, weak institutions and lack of foresight. While the country cannot prevent earthquakes or floods, it can certainly minimize their impact through preparedness, planning and resilience building. A proactive, technologically empowered and community-driven disaster management system is the need of the hour. The way forward lies not in just responding to disasters but in transforming them into opportunities for stronger governance, sustainable development and a safer future for Pakistan's people.
