

# Disaster Management in Pakistan : Challenges & Way Forward

## - Brainstorming -

### → Challenges

to the point

quite well organized and relevant

- 1- Lack of preparedness
- 2- Weak institutional capacity.
3. Inadequate early warning systems.
- 4- Poor infrastructure.
5. Low public awareness and education
6. Slow and uncoordinated response.
- 7- Insufficient resources and Funding
8. Climate change and environmental degradation
9. Vulnerable and marginalized populations

### → Way Forward

strengthen institutional capacity

2. Invest in early warning systems.
  3. Promote community-based disaster risk reduction.
  4. Use Technology and Data
  5. Integrate disaster management into education
  6. Ensure sustainable funding.
  7. Address climate change adaptation
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# Outline

## 1- INTRODUCTION :-

- 1- Hook ✓
- 2- General statement ✓
- 3- Thesis :- Despite facing serious challenges in preparedness and response, disaster management can be improved through better coordination, technological innovation, community engagement and long-term planning.

## 2- CHALLENGES of Disaster Management :-

### 2.1- Lack of Preparedness

- (i) - Delayed Response ✓
- (ii) - Increased Casualties and Damage.



- (iii). Lack of coordination
- (iv). Absence of Early warning utilization.
- (v). Weak community awareness.

## 2.2. Weak Institutional Capacity

- (i). Insufficient skilled personnel.
- (ii). Limited Financial resources
- (iii). Poor Organizational structure.
- (iv). Weak Coordination mechanisms.
- (v). Limited planning and policy implementation.

## 2.3. Inadequate Early Warning Systems -

- (i). Delayed or missed alerts
- (ii). Limited coverage
- (iii). Communication Gaps
- (iv). Insufficient integration with Response Plans.



## 2.4 - Climate Change and Environmental Degradation

- (i). Increased Frequency and Intensity of Disasters.
- (ii). Changing disaster patterns
- (iii). Environmental degradation amplifies disaster risks.
- (iv). Complexity in Planning and Policy.
- (v). Financial Burden.

## 2.5 - Limited Public Awareness and Education -

- (i). Unprepared Communities.
- (ii). Spread of Misinformation
- (iii). Reduced Community Involvement
- (iv). Increased dependence on early aid.

## 3. Way FORWARD for Disaster Management :-

### 3.1. Strengthen Institutional Capacity -



- (i). Improved planning and Preparedness
- (ii). Faster and More Coordinated response
- (iii). Enhanced early warnings and communication
- (iv). Effective use of Resources.

### Investment in 3.2- Early Warning Systems -

- (i). Saves lives by enabling well organized and quite relevant timely evacuation.
- (ii). Minimizes economic and infrastructure losses.
- (iii). Improves emergency response readiness
- (iv). Enhances risk monitoring and forecasting
- (v). Supports climate change adaptation

### 3.3- Improve Infrastructure and Urban Planning

- (i). Reduces vulnerability to disasters
- (ii). Enables safer land use.
- (iii). Reduces urban flooding and



environmental risks.

### 3.4- Address Climate Change Adaptation -

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- (i) - Reduces vulnerability to Climate - Induced Disasters
- (ii) - Protects ecosystems that Buffer Disasters.
- (iii) - Integrates climate into Disaster Policies.
- (iv) - Strengthens Food, water and Livelihood Security.

## 4- CONCLUSION -

In the summer of 2022, a 10 year old boy named Ahmed clung to the roof of his house in rural Sindh. His village had been swallowed by floodwaters overnight. With no warnings, no rescue teams nearby, and no reach to safety, he and his sister spent two days on the rooftop, hungry, terrified and surrounded by water. They were finally rescued by a volunteer group.

Disaster management is a critical and comprehensive process aimed at preparing for mitigation, responding to and recovering from the adverse effects of natural and human-induced disasters. It involves coordinated efforts by governments, organisations and communities to minimize the effect of disasters.



Despite facing serious challenges in preparedness and response, disaster management can be improved through better coordination, technological innovation, community engagement and long-term planning. Pakistan struggles with managing disasters effectively because of the frequency and severity of the disasters it faces. The country's geography and climate make it prone to various types of hazards. However, Pakistan can enhance its resilience and build a more effective framework for disaster management with smarter policies.

Firstly,

Here, is the most significant challenge affecting disaster management in Pakistan is lack of preparedness. When there is no proper plan and training in place, emergency services and authorities often waste crucial time figuring out what to do after a disaster occurs. This leads to delayed rescue efforts, more casualties, and greater damage.



In addition to this, increased casualties and damaged property is another challenge in effecting disaster management. Without proper resilient infrastructure, it places pressure on emergency response systems. For example, during the **2005 earthquake**, thousands of buildings collapsed due to substandard construction, leading to over **80,000 deaths**. Similarly, during the **2022 monsoon floods**, millions of people lost their homes, and large part of Sindh and Balochistan were submerged, revealing how unprepared the built environment is for climate related disasters. Similarly, **Lack of coordination between federal, provincial and local authorities**, is the most persistent challenge. For example, the **National Disaster Management Authority (NDMA)**, **Provincial Disaster Management Authorities (PDMAs)**, and local



government often operates in isolation.

Moreover, Pakistan might have some access to a little early warning technologies — especially for floods and weather-related events — the utilization of these systems is limited and poorly implemented. Often warnings issued by Pakistan Meteorological Department or other relevant bodies do not reach vulnerable communities in time, or are not taken seriously. Public awareness and community-level preparedness are extremely low across much of Pakistan especially in rural and marginalised areas.

Secondly, weak institutional capacity is a major challenge that undermines effective disaster management in Pakistan. One of the key issues is lack of trained personnel and technical expertise. Many disaster management institutions do



not have enough skilled professionals in areas like emergency planning, risk assessment, logistics and crises communication. As a result, when disaster strikes, the response is often low, unorganised, and reactive rather than proactive and efficient. Another major problem is insufficient funding and outdated equipment. Many local-level disaster offices lack the basic tools needed for emergency operations, such as rescue gear, and communication systems and relief supplies. Without adequate investment in these areas, institutions are unable to act quickly or effectively during crises. Additionally, there is often poor coordination among different government departments. Responsibilities are not clearly defined, and bureaucratic delays prevent timely decision-making. Sometimes disaster management is often not a high priority.

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Thirdly, inadequate warning systems are ~~a major challenge~~ to effective disaster management in Pakistan. When early warnings are issued too late — or not at all — affected communities are left with little or no time to prepare or evacuate. In many disasters in Pakistan, delays in flood warnings contributed to widespread loss of life and property. These delays often result from poor forecasting systems. Many remote or marginalised areas in Pakistan do not receive alerts because early warning systems have limited geographical reach. For example, mountainous regions prone to landslides or glacial outburst floods often lack the necessary monitoring equipments. Moreover, even when alerts are generated, there are serious communications breakdown between government bodies and public. Warnings may be delivered through



platforms e.g., official websites on newspapers but many people don't access that platforms especially in rural areas where internet and media access is limited. Additionally, in many cases in Pakistan, even when alerts are received, no immediate actions follow - such as organized evacuations, opening of shelters, or deployment of rescue teams. This disconnect renders the warnings ineffective, as there is no system in place to act on them quickly and efficiently.

Fourthly, climate change and environmental degradation are increasingly serious challenges to disaster management in Pakistan. These environmental factors not only create new risks but also make existing hazards more severe and harder to manage. Climate change has led to



more frequent and intense weather events in Pakistan, including heavy rainfalls, floods, droughts, heatwaves, and glacial lake outburst floods (GLOFs). These extreme events strain the country's already weak disaster management systems. Planning for monsoon and droughts require accurate forecasting, but climate change make weather patterns more erratic, making it harder to issue timely warnings or prepare effective response plans.

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Pakistan is home to thousands of glaciers, especially in the northern areas. Rising global temperatures have accelerated the risk of **Glacial Lake Outburst Floods (GLOFs)**. These floods can occur suddenly and with great force, threatening entire valleys and communities that are not equipped to handle such rapid-onset disasters.



Furthermore, climate change disproportionately affects rural and low income communities, who often live in high risk areas and rely on climate-sensitive livelihoods like farming and livestock. Environmental degradation further reduces their coping capacity, making disaster recovery slower and more difficult. As climate related disasters become more common and widespread, Pakistan's disaster management institutions are struggling to keep up.

Fifthly, unprepared communities pose a significant challenge to disaster management in Pakistan. In many vulnerable regions — particularly rural and underdeveloped areas — people lack access to basic disaster education, emergency training, and early warning information. As a result, when disasters strike, these



communities are often caught off guard, unable to respond effectively, which lead to higher casualties, injuries, and property loss. Unprepared communities also tend to rely entirely on external aid after a disaster, which creates a dependency and slows recovery. Furthermore, the untrained people may make unsafe decisions that put themselves and others at greater risk. Additionally, the absence of **community-based disaster plans, local leadership, and risk awareness** makes it difficult to implement national or provincial disaster management strategies at the local level. Without grassroots readiness, even the best institutional response can be delayed or ineffective.

While disaster management in Pakistan faces serious challenges, there are clear and achievable



ways forward to strengthen the system and reduce the impact of future disasters. The key is to shift from a reactive approach to proactive, coordinated and community-based strategy. which includes strengthening institutional capacity, investment in early warning systems, improved infrastructure and urban planning. Addressing the adaptation of climate change. effort is fine

Now, Firstly strengthening institutional Capacity is one of the most effective and sustainable ways to improve disaster management. Stronger institutions can develop and implement comprehensive disaster risk reduction strategies, conduct vulnerability assessments, and prepare detailed contingency plans. This enables timely action to limit the damage to property and infrastructure. when institutions are well-resourced and organized, they



can coordinate better between government departments, NGOs, military, and international agencies. This improves the speed and efficiency of rescue and relief operations, avoiding duplication and confusion during emergencies. Moreover, strong institutions invest in training and capacity-building of staff, ensuring they have skills and knowledge to handle complex disaster situations. With improved capacity, institutions can establish and maintain effective early warning systems, ensuring that alerts reach at-risk communities in time and are followed by well-organized evacuation or mitigation measures. Stronger institutions also work with international donors and partners to mobilize support when needed.

Secondly, investing in early warning systems is one of the most



effective strategies for the improvement of disaster management in Pakistan. In a disaster prone country like Pakistan — where floods, earthquakes, and climate related events are common — early warning systems provide critical lead time.

For example, accurate flood warnings can help communities <sup>evacuate</sup> before water levels rise, reducing deaths and injuries. ~~Due to the issuance of early warnings,~~ people can secure their belongings, livestock, protect infrastructure and minimize financial losses. Moreover, a well-functioning early warning system especially when combined with education encourages people to take warnings seriously.

Thirdly, improved infrastructure and urban planning play a vital role in minimizing the impact of disasters and enhances a country's resilience. Infrastructure that is built to



withstand earthquakes, floods, and extreme weather can significantly reduce casualties and damage. Well planned infrastructure of urban areas ensures accessible roads, emergency exits and open spaces for evacuation and rescue. Moreover, integrating hazard risk assessments into urban planning ensures that buildings, roads, and settlements are not located in high-risk zones.

Lastly, climate change adaptation focuses on adjusting systems, infrastructure, and behaviours to cope with evolving climate risks. By designing homes, roads and farms to withstand changing weather patterns, communities become less vulnerable to disasters over time. Nature based adaptation not only combats environmental degradation but also acts as a natural barrier against floods, landslides and cyclones, reducing disaster impacts. In rural Pakistan,



millions depend on climate-sensitive sectors like farming and livestock. strategies like **climate-resilient crops, rainwater harvesting and sustainable land use** — help protect them during climate related disasters.

To sum up, disaster management in Pakistan faces a range of serious challenges, including un-prepared communities, weak institutional capacity, poor early warning systems, environmental degradation, and the growing impacts of climate change. These issues are further compounded by limited public awareness, misinformation, and over-dependence on emergency aid. Together, they ~~weaken the~~ ~~country's~~ ~~ability to respond~~ effectively to frequent and increasingly intense disasters. However, these challenges are not insurmountable. A more



resilient and effective disaster management system can be built by investing in early warning systems, strengthening institutions, improving infrastructure and urban planning, promoting community awareness, and mainstreaming climate change adaptation. By shifting from a reactive to proactive approach — Pakistan can significantly reduce disaster-related losses and protect both lives and livelihood. Managing disasters is not just about responding to emergencies — it is about building a safer, more resilient society that is prepared for future.