

DISASTER MANAGEMENT IN PAKISTAN: CHALLENGES AND WAY FORWARD

1. INTRODUCTION

- Pakistan, to date, has been confronted by a range of disasters.

Thesis Statement:

Pakistan faces several challenges in pre disaster, during and post disaster phases of management, however, efforts in green financing, predictive modelling techniques and resource mobilization can help the country adapt and respond effectively.

2. CONTEXT : BRIEF OVERVIEW OF PAKISTAN'S EXPERIENCE WITH DISASTERS

3. CHALLENGES TO DISASTER MANAGEMENT

A. PRE DISASTER PHASE

3.1. Non-availability of data on through risks assessments and vulnerability analysis

→ EIA and IEE not conducted

3.2 Lack of coordination between federal and provincial management bodies

→ Overlap of responsibility between

PDMA and NDMA

3.3 Limited projects and initiatives on mitigation and adaptation

B. DISASTER PHASE

3.4 High response time of rescue teams

→ Late response during Swat flood of 2025.

3.5 Lack of machinery and equipment to deal with disasters

→ Redundant and heavy tools in use

C. POST DISASTER

3.6 Restricted financing for rehabilitation and rebuilding efforts

→ No allocation in Annual Development Plan of provinces

4. WAY FORWARD

4.1 Green financing mechanisms for disaster mitigation projects

→ Green Climate Fund (GCF)

→ GIZ Bank

4.2 Predictive modelling techniques to identify hazards

→ Hydrology Study

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4.3 Trainings and simulations to reduce response time of rescue teams.

4.4 Purchase of modern management tools

→ Modern Chinese equipment cheap and effective

4.5 Welfare programs for affected individuals

→ Inclusion ^{into} of BISP

4.6 Public awareness and preparedness campaigns

→ Improved response in disaster situations

5. CONCLUSION

- Disaster management is a critical component of dealing with disasters
- By taking certain initiatives and improving response ^{time}, Pakistan can ~~effectively~~ overcome challenges and manage disasters efficiently.

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~~Pakistan has historically been at the~~

Pakistan has historically been at the forefront of disasters. It has faced unprecedented losses, as a result, both economically and socially. Dealing with disasters requires a strong management infrastructure. Pakistan, however, has been facing numerous challenges on that front. Firstly, Pakistan lacks access to information and data related to its vulnerabilities as a result of climate change.

This makes planning of projects for mitigation difficult. Similarly, there is no clear line of authority between the provincial and federal management bodies, which makes preparedness and response difficult. Furthermore, organizations responsible in emergency situations are ill trained and unable to respond to disasters in a timely manner. This puts lives in danger, increasing the risk of casualties in such an event. In addition, there is a lack of focus on affected areas in terms of rehabilitation. People are displaced and suffer mentally and financially, for which, reintegration mechanisms are absent. In order to effectively manage disasters, Pakistan

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needs to take proactive steps. Green Tapping into green financing mechanisms for mitigation projects can help reduce financial burden while delivering results. Similarly, purchase of modern equipment is imperative to improve management. Exploration of predictive modelling, with the rise of artificial intelligence can help improve response to disasters. Finally, programs like BTSP can be expanded to provide relief post disaster, to accelerate the rehabilitation process.

Pakistan faces several challenges in pre-disaster, during, and post disaster phases of management, however, efforts in green financing, predictive modelling techniques and resource mobilization can help the country adapt and respond effectively.

Pakistan has been fighting disasters historically, in the form of severe floods, earthquakes and landslides. In the early 2000s, Pakistan suffered one of the deadliest earthquakes, which led to a great loss of lives. Similarly, floods has been the most common disaster faced by the country. It has been accelerated as a result of climate changes and rise in anthropogenic

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activities. The floods of 2022 and most recently 2025, wiped off agricultural and commercial lands, bringing a wave of devastation across the country. Pakistan's response has been limited in dealing with disasters owing to structural and resource constraints.

Pakistan has been historically ^{never struggled} struggling in disaster management efforts. Despite a rise in frequency of such disasters, the response has been weak. The next section of this essay will provide insights into the challenges faced by the country in disaster management.

In the pre-disaster phase, a potential challenge has been the collection and analysis of data. There is a lack of risk assessments and vulnerability analysis, which makes it difficult to identify at risk areas and focus adaptation efforts. Evaluations like Environmental Impact assessment and Initial environmental examination help in gathering of such data. However, they are rarely conducted while carrying out development. This also

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leads to construction in areas like flood plains that increase the risk of disasters. The lack of data remains a challenge for effective planning in disaster management efforts.

Furthermore, there is a lack of coordination between the federal and provincial governments. National disaster management authority (NDMA) and Provincial disaster management authorities (PDMA's) have overlapping roles and responsibilities. Although after 18th Amendment, disaster management became a provincial subject, authority and responsibility have not been entirely devolved. Therefore, confusion over responsibility and authority between NDMA and PDMA's is another challenge to management of disasters.

In addition, Pakistan has adopted limited number of projects in adaptation and mitigation. Despite disasters being increasing in frequency over the years, uptake of projects in response has been slow. This is also due to the problem of financing, as the state faces

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budget deficits, owing to lower allocations ^{towards} ~~to tackle~~ & mitigation projects. The lack of mitigation efforts, leading to increase in ~~future~~ frequency of future disasters is yet another challenge in disaster management.

In the disaster phase, the high response time of rescue teams is a serious problem. In ~~various~~ groups like Rescue 1122, which stand at the forefront of response are late in arriving at the scene. This was evident in the recent Svat flood of 2025, where a family was left stranded for hours in the middle of a river. Due to ^{the} late response, civilians ~~a~~ were taken away by the flood. ~~These~~ Rescue teams suffer from low training and coordination. The lack of timely response leads to greater casualties, posing a serious challenge in disaster management.

Furthermore, institutions lack modern machinery and equipment to deal with disasters. Most of the current resources are outdated and redundant, and cannot reach disaster prone areas. This makes search and rescue efforts

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much more difficult. Modern equipment is necessary to clear roads and remove debris, and even to carry injured civilians in hard to reach spaces, which Pakistan lacks. Lack of modern equipment slows down response efforts, thus posing ^{as} a challenge to ^{the} disaster management process.

In the post disaster stage, there is a lack of financing and planning for rehabilitation of affected areas. Disasters bring destruction and losses, leading to displacements. However, there is no allocation of resources towards such areas under the annual development plans. Even after allocation, release of funds is minimal, leading to alienation and lag in the restoration process. Restricted financing for post-disaster rehabilitation ~~is~~ is a critical challenge for disaster management as it slows down the rebuilding process.

Dealing with disasters requires a strong planning and implementation infrastructure. Pakistan can adopt several policies to improve the mechanism of

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disaster management within the country. The next section of this essay will address some of the potential strategies that can be adopted in this regard.

One of the key mechanisms is to leverage green financing opportunities to fund disaster mitigation and adaptation projects. Institutions like Green Climate Fund (GCF) and GIZ provide grants, instead of the usual loans, to fund resilient projects. This can be an effective way to overcome the threat of future disasters, in a financially responsible manner. Thus, funding through financing institution can help in disaster management, without straining the finances of the country.

Additionally, predictive modelling techniques can be employed to predict certain disasters. With the rise of artificial intelligence and data analysis, certain models can be constructed to understand the areas most at risk or locations most prone to disasters. Hydrology study was conducted by Kuyser Palhtunluwa to create an

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analysis of future floods based on the concept of predictive modelling. Therefore, use of artificial intelligence can help navigate disaster management by identifying ^{and disaster} high prone areas.

Moreover, introducing trainings and simulations for rescue teams and response institutions can be key in handling disasters. Ensuring people are well trained and equipped with coordinated emergency plans will help reduce response time to threats. It will also aid in ~~reduce~~ limiting casualties and ensure timely aid of affected civilians. Therefore, trainings and simulations are imperative to disaster management in order to ensure timely response to threats.

Finally, the introduction of welfare programme is also an integral part of post disaster management. People lose their homes and belongings, are ~~forced~~ displaced and suffer both physically and mentally due to disasters.

Inclusion of affectees in programs like Beraiz Income Support programme

(BEP) can help in reducing the burden on affected population and speed up the rehabilitation process. Thus, introduction of welfare programs is necessary as part of disaster management, to help in reintegration of affected individuals.

To conclude, Pakistan constantly faces an increased threat from disasters with the rise of climate change. Disaster management is a key process to deal with ~~the~~ ^{calamitous} ~~current~~ ^{change} events. However, the country is plagued by numerous challenges in the form of reduced financing, institutional and capacity gaps and lack of planning and infrastructure. ~~To~~ the country needs to revamp its disaster management capabilities through green financing initiatives, ~~pre~~ increased preparedness measures and post disaster plans. By taking timely steps, Pakistan can lead the way in dealing with disasters in an effective and efficient manner, setting an example for others to follow.