

Mock Exam - I

English Essay

Topic: Disaster Management in Pakistan: Challenges and Way Forward

Outline

1. Introduction

a. What are Disasters?

b. National Disaster Management Authority of Pakistan

c. Thesis Statement: Despite frequent natural and human induced disasters, Pakistan's disaster management system remains reactive and fragmented due to poor governance, lack of preparedness, and inadequate institutional coordination.

2. Understanding Disaster Management: Global and National context

a. History of Disaster Management

b. International Decade for Natural Disaster Reduction (IDNDR)

c. Role of NDMA of Pakistan and Germanwatch's Global Climate Risk Index

3. Major Disasters in Pakistan's History

a. Reports of NDMA and UNDP

4. Causes of Disasters and Vulnerability in Pakistan

5. Challenges in Effective Disaster Management

- a. Institutional Fragmentation and Weak Coordination
- b. Insufficient Funding and Resource Allocation
- c. Inadequate Early Warning System and Technological Limitations
- d. Public Awareness and Community Preparedness

6. Way Forward

- a. Strengthening Institutional Coordination and Governance
- b. Enhancing Financial Mechanisms
- c. Modernizing Early Warning Systems
- d. Promoting Public Awareness and Community Preparedness

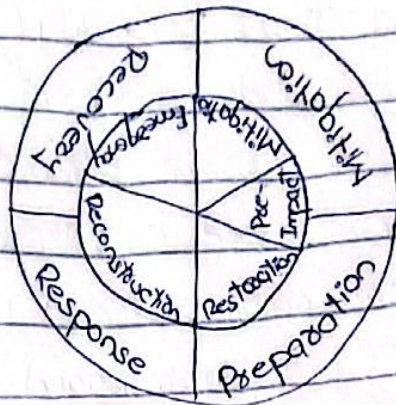
7. Denouement

The Essay

Disasters occur when a hazard (like flood, fire, or Earthquake) interacts with vulnerability (poor infrastructure, lack of preparedness) and insufficient capacity to cope. Hazards may be natural but disasters are not. Disasters are human-induced catastrophic events, while hazards are natural calamities and can be controlled or less destructive if properly managed. To cope with disasters, countries have established respective authorities and institutions to manage and mitigate their impacts. For instance, Federal Emergency Management Agency (FEMA) in United States, the Japan Meteorological Agency (JAMA), the National Disaster Management Authority (NDMA) in Pakistan. The National Disaster Management Authority in Pakistan serve as a central bodies for disaster preparedness, coordination, and response. Despite frequent natural and human induced disasters, Pakistan's disaster management system remains reactive and fragmented due to poor governance, lack of preparedness, and inadequate institutional governance; however, an integrated community-based, and technologically driven approach can transform vulnerability into resilience.

Globally, the concept of disaster

management evolved after the United Nations declared 1990s as International Decade for Natural Disaster Reduction (IDNDR), aiming to shift focus from post-disaster relief to pre-disaster preparedness and risk reduction.



Modern Disaster Management:

A Four-Phase Approach

Comprehensive disaster management is based on four distinct components:

Mitigation: Treatment the hazard such that it impacts the society

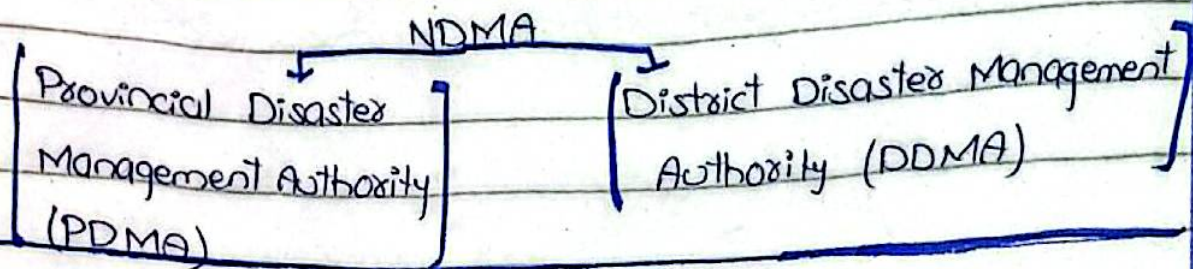
Preparedness: Equipping people who may be impacted by disaster.

Response: Taking action to reduce or eliminate the impact

Recovery: Recovery phase after immediate response has ended.

While these four phases provide a conceptual foundation for disaster management, their effective implementation in Pakistan depends on a well-structured institutional framework led by National Disaster Management Authority.

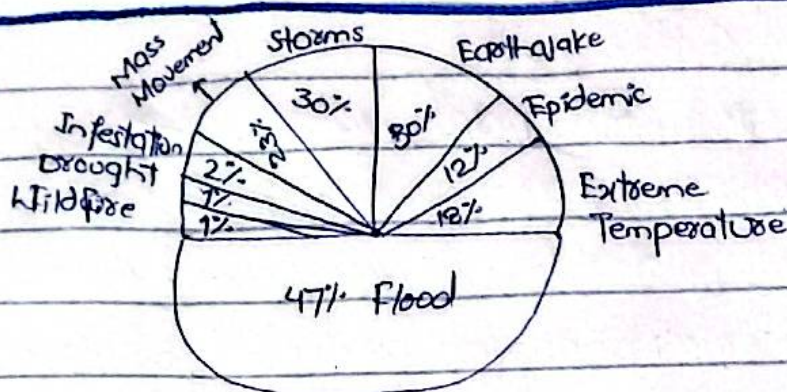
(NDMA). The devastation earthquake of 2005 exposed Pakistan's lack of preparedness and institutional coordination. In response, the government established the National Disaster Management Act 2010, though it began its functioning in 2007. NDMA serves as the apex Federal body responsible for policy formulation, coordination, and implementation of disaster Risk Reduction (DRR) strategies across the country.



Pakistan's disaster Management system aligns with global frameworks such as Sendai Framework for Disaster Risk Reduction (2015-2030), and the Paris Climate Agreement (2015), emphasizing resilience building, community participation and climate adaptation. Despite these measures, Pakistan consistently ranks among the top ten countries affected by climate disasters in Germanwatch's Global Climate Index, indicating that while institutional structures exist, their operational effectiveness and local preparedness remain weak.

Pakistan has experienced a series of

of devastating natural and human-induced disasters that have profoundly shaped its disaster management policies. The 1970 cyclone in East Pakistan (now Bangladesh), claiming over 300,000 lives and exposing administrative weakness, remains one of the deadliest in history. The 2005 Kashmir earthquake, measuring 7.6 on Richter scale, resulted in over 73,000 deaths and displaced 3.5 million people, prompting the creation of NDMA. There is a clear cyclic pattern of natural and human induced disasters in the history of Pakistan.



Source: International

Disaster Database

Pakistan suffered with 10 Billion US Dollars economic loss due to catastrophic floods affecting over 20 million people, submerging one-fifth of the land area. Subsequent floods in 2010, 2012, 2014, and more recently 2022, further revealed Pakistan's vulnerability to climate-induced disasters. According to World

Bank, 2022 floods alone affecting 33 million people and causing losses of nearly US \$ 30 Billion. The United Nations Development Programme (UNDP), in collaboration with NDMA, has consistently warned of the country's average temperature has risen by 1°C since 1960, intensifying the frequency of floods, droughts, and glacial melt. Moreover, disaster losses consume upto 3-4% of Pakistan's GDP annually, according to UNDP assessments. However, there are some causes and grave reality checks that backed the reasons of disasters.

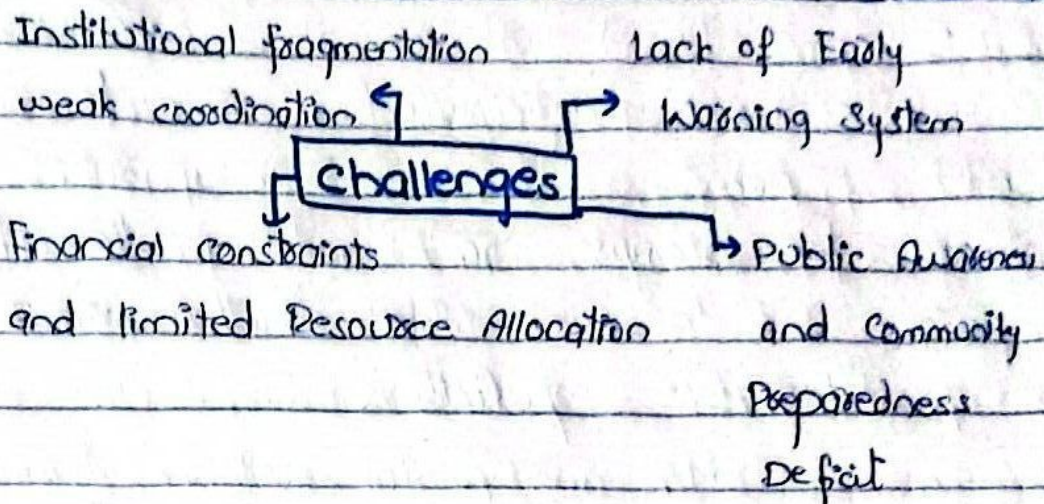
Pakistan's vulnerability to disasters stems from a complex interplay of geographical, climatic, social, economic and governance-related factors. Geographically, country lies in a seismically active zone, with major fault lines crossing the northern and western regions making it prone to earthquakes. Climatically, Pakistan is among the world's most affected nations by global warming and erratic monsoon patterns, which intensify floods, droughts, and glacial lake outbursts. Social vulnerabilities such as poverty, illiteracy, and gender disparities reduce community resilience, particularly in rural areas. The combination of climate exposure and institutional fragility makes Pakistan

one of the top countries on Global Climate Risk Index while these ^{hazards} causes are largely determined by geography and climate, the scale of destruction they cause is magnified by deep rooted institutional and structural weaknesses.

Institutional Fragmentation and weak coordination between federal, provincial, and district bodies is a primary challenge in Pakistan's disaster management. Although NDMA Act of 2010 established a three-tiered structure- NDMA, PDMA's, and DDMA's, the roles and responsibilities among these entities often overlap. For instance, during 2022 floods, confusion over relief distribution between NDMA and provincial authorities in Sindh and Balochistan delayed emergency aid. This administrative disconnect undermines timely disaster response and affect the public trust on governmental authorities.

Another major hurdle is insufficient funding and resource allocation for disaster preparedness and mitigation. Pakistan spends less than 0.2% of its GDP on disaster risk reduction, according to UNDP 2023 Climate Risk Report. Most resources are diverted towards post-disaster relief instead

of pre-disaster planning, which perpetuates a reactive cycle. This chronic underinvestment, such as post-2010 and 2022 floods lack of funds, limits the development of resilient infrastructure and undermines Pakistan's ability to adapt to climate risks.



Pakistan's inadequate Early warning systems and technological limitations further exacerbate disaster impacts. The Pakistan Meteorological Department and NDMA often rely on outdated monitoring tools and limited satellite coverage.

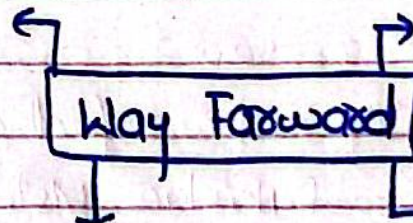
According to UNDRR, Pakistan's early warning dissemination reaches less than 40% of at-risk populations, particularly in remote and mountainous regions. Recent floods illustrated this gap when many communities along the Indus River basin were not alerted in time, leading to large-

scale displacement.

A significant but often overlooked challenge is the low level of public awareness and community preparedness. Most citizens, especially in rural and underdeveloped areas lack basic knowledge of disaster response practices. UNDP 2021 report found that less than 30% of communities have participated in any form of disaster preparedness training. During 2015 Karachi heatwaves, for example, inadequate public information campaigns led to over 1200 deaths primarily among vulnerable populations.

Strengthening
Institutional
Coordination

Modernizing Early
Warning Systems



Enhancing Financial
Mechanisms.

Public awareness
and Resource
Mobilization

To transform Pakistan's disaster management system from reactive to a resilient model, a comprehensive and multi-dimensional strategy is required.

To overcome fragmentation, Pakistan

National Disaster Risk Management Authority

Designated Minister

Management Team

Provincial Disaster Risk Management (PDRM)

Secretary

Civil Defence Force

District Disaster Risk Management (DDRM)

District Officers

Civil Defence Force

National Disaster Command
Centre

Planning and
Coordination

(Proposed) Disaster Management
Mechanism

must establish a unified command and coordination system under NDMA that ensures vertical and horizontal integration across federal, provincial and district levels. The creating of standard operating procedures is crucial to cope with bureaucratic delays. Adopting a National Disaster Data Portal for real-time coordination can enhance transparency and speed. Furthermore, lessons can be drawn from Japan's centralized disaster response Model, which synchronizes all departments under one command during emergencies.

National Disaster Risk Insurance Funds and Catastrophe Bonds, as practiced in countries like Mexico, can provide immediate liquidity for emergency relief. To ensure transparency and proper resource mobilization, NDMA in collaboration with Ministry of Finance, should design a financial mechanism to utilize funds for pre-disaster mitigation.

Pakistan must invest in modern forecasting and data integration tools particularly through collaboration with SUPARCO, PMD, and international agencies like JICA and UNDP.

Installations of weather stations (automated), flood gauges, and GIS-based disaster mapping can significantly enhance prediction accuracy. The establishment of Community based Early Warning Network (CBEWN) in vulnerable regions would ensure timely alerts reach at real-time communication. The success of Bangladesh's cyclone warning system offers a replicable model for Pakistan's coastal and Flood prone areas.

A sustainable disaster management policy must prioritize community resilience and public education as the first line of defense. The government, in partnership with NDMA, PDMA, and civil society organizations, should integrate disaster risk education into school curricula and conduct regular awareness campaigns in vulnerable districts.

In conclusion, effective disaster management in Pakistan demands a shift from reactive response to pro-active preparedness rooted in institutional coordination, financial stability, technological advancement, and community participation. Despite the

presence of National Disaster Management Authority and supporting provincial frameworks, recurring disasters reveal persistent systemic gaps. However, Pakistan can significantly reduce disaster risks and enhance recovery capacity through strengthening governance, investing in early warning technologies, mobilizing domestic financial resources, and empowering local communities through education and training.
