

Disaster Management: A Perception Study of NDMA.



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CERTIFICATE

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Author's Declaration

I Amber Taqdees hereby state that my MPhil thesis titled **Disaster Management: A Perception Study of NDMA** is my own work and has not been submitted previously by me for taking any degree from Pakistan Institute of Development Economics or anywhere else in the country/world. At any time if my statement is found to be incorrect even after my Graduation the university has the right to withdraw my Mphil degree.

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Dedication

I dedicate this study to my mother, Madam Rukhsana Tasneem (Late). Without her efforts, hard-work, prayers and encouragement, I would not have accomplished anything in my life.

Acknowledgement

I would like to extend my gratitude to the many people who supported this research study. My supervisor, Dr. Anjeela, provided support and timely feedback. Mr Fida Muhammad Khan reviewed the document extensively and both helped me throughout the thesis process.

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Abstract

The abstract presents a comprehensive overview of the study's focus on the National Disaster Management Authority (NDMA) in Pakistan, examining its effectiveness, efficiency, challenges, and role in disaster management. The NDMA was established under the National Disaster Management Act – 2010, operating under the supervision of the National Disaster Management Commission (NDMC). The study aimed to assess the NDMA's plans, their implementation, the utilization of funds, challenges faced, and its role in disaster management. To the best of our knowledge, the evaluation of NDMA was not being done on the lines of effectiveness, efficiency, and relevancy. This was the research gap that this thesis aimed to bridge. A qualitative research strategy was employed, involving key informant interview hard work government officials, international organizations, donors, academia, media, and the private sector. Thematic analysis was applied to analyse the data, yielding 17 themes and 21 sub-themes. The findings highlighted NDMA's coordination with stakeholders, including provincial authorities, the military, health department, and other agencies, for effective disaster management. Collaborative efforts demonstrated the significance of emergency response and risk reduction. However, financial constraints and reliance on external funding posed challenges to plan implementation. Donor preferences, political priorities, and reactive funding were obstacles. The study emphasized the need for enhanced funding and trained personnel to strengthen NDMA's capacity in disaster management.

Key Words: Disaster Management, Disaster Risk Management, Disaster Risk Reduction, Disaster Risk Governance

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List of Abbreviation

NDMA-National Disaster Management Authority

NIDM-National Institute of Disaster Management

DDMA-District Disaster Management Authority

PDMA-Punjab Disaster Management Authority

PDMA-Provincial Disaster Management Authority

NDMC-National Disaster Management

Commission DMC-Disaster Management Cycle

NDMF-National Disaster Management Fund

PNDMA-Pakistan National Disaster Management

Act

HEICS-Hospital Emergency Incident Command System

UNISDR-United Nations International Strategy for Disaster

Reduction PDR-Post-Disaster Recovery

(NMH-EWS-P)-National Multi-Hazard Early Warning System Plan

NDMP-National Disaster Management Plan

CBOs-Community Based Organizations

SFDRR-Sendai Framework for Disaster Risk

Reduction HFA-Hyogo Framework for Actions

CDWP-Central Development Working Party

ISDR-International Strategy for Disaster Reduction

GLOF-Glacial Lake Outburst Flood

CHAPTER 1

1.1 INTRODUCTION

Defined by the United Nations, Disaster Risk Reduction can be defined as “the organization, planning and application of measures preparing for, responding to and recovering from disasters” (UNDRR). Disaster management is the procedure of in what way we plan for, act to, and realise the consequences of chief malfunctions while dealing with the economic, human, environmental, or material impressions of a stated disaster. Disasters can be of natural origin and can be man-made also (Shah, 2020).

In response to the imperative need for addressing and managing natural disasters, the establishment of the National Disaster Management Authority (NDMA) was initiated. This institution, conceived under the auspices of the National Disaster Management Act of 2010, operates with a specific focus on disaster management within the geographical context of Pakistan. The NDMA operates under the purview of the National Disaster Management Commission (NDMC), an entity led by the Prime Minister of Pakistan.

The mandate of the NDMA is rooted in the comprehensive Disaster Management Cycle (DMC). This cycle encompasses four distinct phases: Preparedness, Risk Reduction, Mitigation, Relief, and Rehabilitation. Under the leadership of the Prime Minister, who serves as the head of the NDMC, the NDMA executes and oversees the strategic implementation of these critical components of the disaster management framework. The establishment of the NDMA, with its organisational structure and alignment with the Disaster Management Cycle, reflects a concerted effort to enhance the nation's resilience and response mechanisms in the face of natural calamities.

The role of academia in disaster management is pivotal, contributing significantly to research, education, and the development of innovative strategies to enhance resilience and response capabilities. Academic institutions serve as hubs for multidisciplinary research, generating insights into the complexities of disasters and providing evidence-based solutions. Researchers contribute valuable knowledge on various aspects, including risk assessment, early warning systems, community preparedness, and post-disaster recovery. The academic community plays a crucial role in training future professionals and emergency responders, fostering a culture of preparedness and proactive disaster management. Collaborations between academia, government agencies, and non-governmental organisations strengthen the

integration of research findings into policy and practice, ensuring a more effective and informed approach to disaster management.

The media functions as a crucial stakeholder for the National Disaster Management Authority (NDMA), playing a pivotal role in disseminating information and shaping public perception during disasters. As an information provider, the media serves to communicate critical updates, safety protocols, and response efforts, acting as a conduit between the NDMA and the public (Comfort et al., 2012). The media's role as a stakeholder aligns with the broader concept of societal stakeholders in disaster management, where collaboration with various entities, including the media, is essential for effective risk communication and response (Linnenluecke et al., 2012). The value of the media to the NDMA is underscored by its ability to influence public behaviour, enhance community resilience, and hold authorities accountable (Perry & Mushkatel, 1986). Through transparent and accurate reporting, the media contributes to public trust in the NDMA's capabilities and facilitates an informed and coordinated disaster response.

The role of a state in disaster management is multifaceted and encompasses various responsibilities aimed at ensuring the safety and well-being of its citizens. States are tasked with establishing and implementing effective disaster management policies, strategies, and response mechanisms. This involves the development of robust early warning systems, comprehensive risk assessments, and the formulation of mitigation and preparedness plans (UNDRR, 2019). Additionally, states play a pivotal role in coordinating emergency response efforts, mobilising resources, and providing timely and accurate information to the public during disasters (Perry & Lindell, 2008). The state's involvement extends to post-disaster recovery and rehabilitation, including the restoration of infrastructure, provision of humanitarian aid, and facilitating long-term community resilience (Comfort et al., 2010). The effective governance and leadership of the state are essential in fostering a cohesive and coordinated approach to disaster management, ultimately contributing to the overall resilience of the nation.

The purpose of conducting this research study was to evaluate the NDMA along the lines of relevance, effectiveness and efficiency. This study has undertaken the research gap which has not been addressed earlier, so I have attempted to fill the research gap by evaluating the NDMA along the parameters of relevance, effectiveness, and efficiency.

1.2 Background

The year 2022 marked a significant chapter in Pakistan's history as the nation grappled with

devastating floods triggered by heavy monsoon rains. These floods resulted in extensive damage to infrastructure, loss of lives, and displacement of communities. The National Disaster Management Authority (NDMA) played a pivotal role in orchestrating the disaster response efforts. However, the scale and impact of the floods necessitate a comprehensive evaluation of NDMA's effectiveness, efficiency, and relevance.

From June to August 2022, Pakistan experienced an unprecedented disaster characterised by torrential rains, riverine, urban, and flash flooding. According to the National Disaster Management Authority (NDMA), the floods affected approximately 33 million people, equivalent to one-seventh of the country's population, with nearly 8 million individuals displaced. The catastrophe claimed the lives of 1,739 people, and children accounted for one-third of the fatalities. The floods, intensified by rain-induced factors and glacial melt, triggered landslides that destroyed millions of homes, and vital infrastructure, and the submersion of entire villages. A post-disaster needs assessment (PDNA), spearheaded by the Government of Pakistan and supported by entities such as the Asian Development Bank (ADB), the European Union, United Nations (UN) agencies, with technical facilitation from the United Nations Development Programme, and the World Bank, was completed on October 28, 2022. Preliminary estimates from the PDNA indicate a direct consequence of the floods on the national poverty rate, projecting an increase of 3.7–4.0 percentage points. By October 11, 2022, 94 districts were declared calamity-affected, encompassing over half of all districts in the country, with a concentration in the Balochistan, Sindh, and Khyber Pakhtunkhwa provinces. Of the 25 poorest districts in the country, 19 were affected by the calamity (NDMA, 2022; ADB, EU, UN, & World Bank, 2022).

1.3 Research Problem:

The research statement was to assess the quality of the government's response to disasters. Our goal was to investigate the effectiveness of the plans that have been devised and the extent to which these plans have been followed. We aimed to investigate the efficiency of the NDMA in terms of the availability and utilisation of funds to achieve its set targets. We investigated the challenges faced by NDMA to achieve its objectives. This thesis examined the significant role played by NMDA in the domains of infrastructure reconstruction and its relevance in terms of disaster management.

Evaluation is the systematic process of assessing the design, implementation, and outcomes of a program, policy, or organisation to determine its effectiveness, efficiency, and relevance. In the context of the National Disaster Management Authority (NDMA), conducting an evaluation is crucial for several reasons. First, it provides insights into the authority's overall

performance, helping to identify strengths and weaknesses in its strategies and operations. This information is invaluable for making informed decisions, improving existing processes, and enhancing disaster management capabilities. Second, evaluation allows for the measurement of NDMA's efficiency in resource allocation and utilisation, ensuring that the organization optimally uses its resources to achieve desired outcomes. Lastly, assessing the relevance of NDMA's policies and practices ensures alignment with contemporary global standards, fostering adaptability to emerging threats and enhancing the authority's effectiveness in responding to disasters. In essence, evaluation is vital for the continuous improvement of NDMA, ultimately contributing to the safety and well-being of communities in the face of natural or man-made disasters.

1.4 Research Questions

The research questions I shall be searching are as follows:

1. Has the NDMA been effective and successful in terms of achieving its targets so far?
2. What is the extent of quality-of-service delivery provided by NDMA?
3. What relevant and significant role does NDMA play in managing disasters?

1.5 Explanation of the Key Terms/Concepts:

1.5.1 Disaster Management

According to the United Nations, disaster management is “The organization, planning and application of measures preparing for, responding to and recovering from disasters”. (UNDRR)

1.5.2 Disaster Risk Management

DRM is described as "the systematic process of using administrative directives, organizations, operational skills and capacities to implement strategies, policies, and improved coping capacities in order to lessen the adverse impacts of hazards, and the possibility of disaster" by the United Nations International Strategy for Disaster Reduction (UNISDR) (Shah,2020).

1.5.3 Disaster Risk Reduction

DRR can be defined as the systematic development and application of policies, strategies, and practices to minimise vulnerabilities and disaster risks throughout a society, to avoid (prevention) or to limit (mitigation and preparedness) adverse impact of hazards, within the broad context of sustainable development (ISDR, 2004) (Van Niekerk, 2007).

1.5.4 Disaster Risk Governance

According to the International Strategy for Disaster Reduction (ISDR), Disaster Risk Management (DRM), is further described as "the systematic process of using administrative

decisions, organization, operational skills, and capacities to implement policies, strategies, and coping capacities of the society and communities to lessen the impacts of natural hazards and related environmental and technological disasters (Van Niekerk, 2007).

1.6 Significance of the Research:

There have been many studies, however, studies mostly have focused on one aspect of disaster management and state intervention. This research, however, is assessing 3 parameters which are the efficiency, effectiveness, and significance of NDMA. This study will help the stakeholders and policy experts to devise a policy that will address the shortcomings which are obstructing the way of NDMA towards improvement and betterment.

1.7 Description of the Study Site:

It is a subject-specific study that entails disaster management as a subject to be discussed. The study revolves around the responses of NDMA and how it responds to a disaster or how post-disaster efforts are taken in case of disaster-hit areas in Balakot.

1.8 Policy Context:

Disaster Management is a challenging task for the stakeholders including government, volunteers, and the affected people. The NDMA has been there to mitigate the disastrous effects, minimize the effects of the shocks, to rehabilitate and restore the disaster-hit community to normal. In doing its job, the NDMA faces financial, bureaucratic, administrative, and geographical constraints. These constraints limit the working of NDMA. The study, therefore, will inform policy-making and execution about the working of NDMA by identifying the key areas of importance. Risk, in the context of disaster management, can be defined as the potential for harm or adverse consequences resulting from the interaction of hazards with vulnerable elements, including people, property, infrastructure, and the environment. This definition aligns with the terminology used in disaster risk reduction (UNDRR). Vulnerability, within the context of disaster management, is defined as the degree to which a system, community, or individual is susceptible to the adverse impacts of hazards or stresses. It encompasses various factors, including the physical, social, economic, and environmental conditions that influence the ability of an entity to cope with, resist, and recover from the effects of disasters (UNDRR). Preparedness, in the realm of disaster management, refers to the activities and measures undertaken to enhance the capability of individuals, communities, organizations, and systems to anticipate, respond to, cope with, and recover from the impacts of hazards. It involves planning, training, coordination, and the development of resources to ensure effective and timely response efforts (UNDRR). In the context of disaster management, prevention refers to the deliberate and

proactive measures taken to avoid or reduce the occurrence, impacts, and consequences of hazards. These measures are aimed at minimizing the potential for disasters and include actions such as enforcing building codes, implementing early warning systems, and promoting land-use planning that considers risk reduction (UNDRR).

This study operates within the policy context of disaster management in Pakistan, particularly focusing on the National Disaster Management Authority (NDMA). Established under the National Disaster Management Act of 2010, the NDMA plays a pivotal role in coordinating and implementing measures for disaster preparedness, response, and recovery. The study critically examines the historical evolution of the NDMA's mandate, emphasizing its foundational goals and objectives. Additionally, it explores the legal and regulatory framework provided by the NDMA Act of 2005, offering insights into the statutory basis and delineation of responsibilities. By assessing the NDMA's multifaceted responsibilities, including disaster risk reduction, preparedness, response, and recovery, the study aims to contribute to the policy discourse on enhancing the effectiveness, relevance, and efficiency of disaster management in Pakistan. The findings of this research are expected to inform policy recommendations for improving the NDMA's role and overall disaster management strategies in the country.

CHAPTER 2

REVIEW OF THE LITERATURE

The available literature is reviewed in this chapter. A thorough review of the extant literature presents a theoretical underpinning for the research question under investigation. The literature review helped in the examination of various antecedents, outcomes, and impacts related to this administrative act of NDMA. We have witnessed disaster management in some developing and developed countries. The state cannot save its people from impending disasters but can only manage these disasters. For example, from Haiti to New York, even the US government could not help people save from earthquakes and Hurricanes like Katrina. However, their disaster management department is efficient enough to help the public in saving (during disasters) and then rehabilitating their people (post disasters).

The National Disaster Management Authority (NDMA) plays a pivotal role in ensuring effective disaster response and management within a nation. As the frequency and intensity of natural and man-made disasters continue to rise globally, evaluating the performance of NDMA becomes increasingly crucial. This literature review aims to critically examine existing research on the evaluation of NDMA, focusing on key dimensions such as effectiveness, efficiency, and relevance.

Focusing on the role of NDMA in Pakistan, we will investigate the literature review covering the content related to disaster management and the role of NDMA. To the best of our knowledge, the evaluation of NDMA was not being done on the lines of effectiveness, efficiency, and relevancy. This is the research gap that this thesis aims to bridge.

The National Disaster Management Authority (NDMA) is a critical institution tasked with coordinating and implementing disaster management efforts at the national level. This literature review delves into existing research and scholarly works to comprehensively understand the mandate of the NDMA and its evolution over time.

Historical Evolution of NDMA's Mandate:

In his historical analysis, Kumar (2015) traces the origins of NDMA's mandate back to the early 2000s when it was established in response to the growing need for a centralized body to oversee disaster management. The study explores the initial goals and objectives set for NDMA, shedding light on its foundational mandate.

Legal Framework and Statutory Basis:

Analysing the legal framework of the NDMA Act of 2005 provides insights into the statutory basis for NDMA's authority and the delineation of its responsibilities.

Ahmed and Malik (2018) outline the key components of NDMA's mandate, emphasizing its role in disaster risk reduction, preparedness, response, and recovery. The research underscores the comprehensive nature of NDMA's responsibilities, reflecting the multifaceted challenges of disaster management while, Hassan and Khan (2019) examine the collaborative aspect of NDMA's mandate by assessing the coordination mechanisms established with various stakeholders, including government agencies, non-governmental organizations (NGOs), and international partners. Understanding the relational dimensions of NDMA's mandate is crucial for effective disaster response.

Focusing on NDMA's policymaking role, Ali and Khan (2017) analyse the authority's contributions to the development and revision of disaster management policies. The study explores how NDMA's mandate extends beyond operational aspects to influence broader policy frameworks.

Investigating the challenges faced by NDMA, Rizvi and Qureshi (2020) discuss how external factors, such as climate change and emerging threats, have influenced the evolution of NDMA's mandate. The research sheds light on the adaptive nature of NDMA's responsibilities in response to contemporary challenges.

Khan and Ahmed (2018) conducted a study assessing the effectiveness of NDMA in responding to natural disasters. Their findings revealed significant improvements in response times and coordination, particularly in flood and earthquake scenarios. This research emphasizes the importance of continuous evaluation to sustain and enhance the effectiveness of NDMA.

However, Rasheed and Malik (2020) explored the impact of NDMA's relief efforts during the 2019 floods, employing impact assessment as a measure of effectiveness. Positive correlations were found between NDMA's interventions and reduced casualties, showcasing the authority's effectiveness in disaster response.

Hussain and Abbas (2019) contributed a study on resource allocation efficiency within NDMA, providing a comparative analysis of resource utilization across multiple disasters. The research highlights variations in efficiency and underscores the need for a standardized resource allocation framework to enhance overall efficiency.

Likewise, Malik and Haq (2017) focused on operational costs and budgeting, evaluating the

efficiency of NDMA's expenditure. Their findings identified areas for improvement, including technology investments and training programs, emphasizing the importance of cost-effectiveness in NDMA's operations.

Ali and Akhtar (2018) critically examined the alignment of NDMA policies with international disaster management standards. Their research highlighted areas where policy revisions are necessary to ensure continued relevance on the global stage.

Similarly, Kumar and Singh (2021) explored NDMA's adaptability to emerging threats, analysing strategic shifts in disaster preparedness. The study revealed the importance of policy flexibility to maintain relevance in the face of evolving challenges.

While the existing literature provides valuable insights into NDMA's evaluation, several research gaps are evident:

While the literature provides valuable insights into NDMA's mandate, several research gaps are evident i.e. Limited scholarly exploration into the practical implementation of NDMA's mandate at the regional and local levels. Insufficient analysis of the effectiveness of NDMA's coordination mechanisms with diverse stakeholders. Limited studies comprehensively address the efficiency of NDMA's resource allocation strategies across diverse disaster scenarios. Gaps exist in understanding the cost-effectiveness of specific initiatives, such as technology investments, in enhancing overall efficiency.

Few studies assess the long-term impact and sustainability of NDMA's response efforts beyond immediate disaster scenarios. Gaps exist in understanding the effectiveness of NDMA in managing complex, multi-hazard scenarios that require integrated responses. Inadequate research explores the dynamic nature of NDMA policies and their adaptation to evolving global and local disaster management standards. Insufficient attention is given to the role of community engagement in enhancing the relevance of NDMA initiatives.

The literature tends to focus on specific dimensions (**efficiency, effectiveness, relevance**) individually, lacking a holistic, interdisciplinary approach. Gaps exist in understanding the interconnectedness of these dimensions and their collective impact on overall disaster management effectiveness.

This literature review offers a comprehensive overview of NDMA's mandate, tracing its historical roots, examining legal frameworks, and exploring key components. Understanding the intricacies of NDMA's responsibilities, as well as identifying research gaps, is crucial for policymakers, practitioners, and researchers working in the field of disaster management.

Further research is needed to address these gaps and ensure the continued effectiveness of NDMA in fulfilling its mandate.

While existing literature offers valuable insights into NDMA's performance, the identified research gaps underscore the need for further investigation. Future research should prioritize comprehensive assessments of **efficiency, effectiveness, and relevance**, contributing to the continuous improvement of NDMA's disaster management capabilities. Addressing these gaps will provide a more holistic understanding of NDMA's performance and guide strategic enhancements for the future.

The National Disaster Management Authority (NDMA) plays a crucial role in safeguarding communities and minimizing the impact of disasters. An effective evaluation framework is essential to ensure the continuous improvement of NDMA's performance. This proposed framework combines elements from various disciplines to comprehensively assess NDMA's effectiveness, relevance, and efficiency.

Theoretical Foundation:

1. Institutional Theory:

In understanding the historical evolution of NDMA's mandate, Institutional Theory provides a lens to analyse how external pressures and the institutional environment shaped the creation and early goals of NDMA (Kumar, 2015). This theory helps illuminate the factors that influenced the establishment of NDMA as a centralized body for disaster management, emphasizing the foundational mandate embedded in the institution. Institutional theory emphasizes the importance of organizational structures, norms, and values. NDMA operates within a broader institutional context, and its effectiveness is influenced by how well it aligns with institutional expectations. The relevance of NDMA is determined by its ability to adapt to changing institutional demands and expectations related to disaster management.

2. Legal and Regulatory Framework:

The legal and regulatory framework, as highlighted by the NDMA Act of 2005 (Government of Pakistan, 2005), forms a crucial part of the theoretical underpinning. The Institutional Analysis and Development (IAD) framework can be employed to dissect the formal rules, such as the legal basis of NDMA, and the informal rules that govern its operation. This framework aids in comprehending the statutory basis and delineation of responsibilities within NDMA.

3. Comprehensive Disaster Management Framework:

To understand the multifaceted nature of NDMA's mandate, a Comprehensive Disaster Management (CDM) framework is essential (Ahmed & Malik, 2018). This framework encompasses disaster risk reduction, preparedness, response, and recovery, providing a holistic perspective on NDMA's role. The CDM framework assists in unravelling the interconnectedness of NDMA's responsibilities in managing diverse challenges in disaster management.

4. Collaborative Governance:

Examining NDMA's coordination mechanisms with stakeholders necessitates the application of Collaborative Governance theory (Hassan & Khan, 2019). This theory helps elucidate how NDMA interacts with various stakeholders, including government agencies, NGOs, and international partners. Understanding the relational dimensions of NDMA's mandate is crucial for effective disaster response and can be explored through the lens of Collaborative Governance.

5. Policy Implementation Theory:

The influence of NDMA in policy development can be explored using Policy Implementation Theory (Ali & Khan, 2017). This theory allows for an examination of how NDMA's mandate extends beyond operational aspects to influence broader policy frameworks. It delves into the dynamics of policy development, implementation, and revision within the context of disaster management.

6. Adaptive Governance:

In investigating the challenges faced by NDMA and its evolving mandate, Adaptive Governance theory (Rizvi & Qureshi, 2020) offers a valuable perspective. This theory enables an understanding of how external factors, such as climate change and emerging threats, influence the adaptive nature of NDMA's responsibilities in response to contemporary challenges.

7. Evaluation and Performance Measurement:

To assess the effectiveness, efficiency, and relevance of NDMA, Evaluation and Performance Measurement theory is pertinent (Khan & Ahmed, 2018; Rasheed & Malik, 2020; Hussain & Abbas, 2019; Malik & Haq, 2017; Ali & Akhtar, 2018; Kumar & Singh, 2021). This theory guides the evaluation process, incorporating metrics for assessing response times, resource

allocation efficiency, and policy relevance. The research gaps identified in comprehensive efficiency analysis, long-term effectiveness assessment, dynamics of relevance, and interdisciplinary approaches provide avenues for future studies grounded in this theoretical framework.

This theory focuses on developing metrics and key performance indicators (KPIs) to assess organizational performance. Evaluating the efficiency of NDMA involves measuring its resource utilization, response time, and overall operational effectiveness. The framework will incorporate relevant performance indicators to quantify and assess NDMA's efficiency.

This theoretical framework, drawing from Institutional Theory, IAD, CDM, Collaborative Governance, Policy Implementation Theory, Adaptive Governance, and Evaluation and Performance Measurement, forms a comprehensive lens for understanding NDMA's mandate. By incorporating these theoretical perspectives, this research aims to bridge existing gaps in the literature and contribute to a nuanced understanding of NDMA's evolving role in disaster management within the specific context of Pakistan.

8. Systems Theory:

Systems theory posits that an organization, such as NDMA, can be viewed as a complex system with interconnected components. This theory helps in understanding how different parts of the organization function together and how changes in one area may affect the entire system. The effectiveness of NDMA can be evaluated by analysing how well its various components work together in responding to and managing disasters.

9. Performance Measurement and Management Theory:

This theory focuses on developing metrics and key performance indicators (KPIs) to assess organizational performance. Evaluating the efficiency of NDMA involves measuring its resource utilization, response time, and overall operational effectiveness. The framework will incorporate relevant performance indicators to quantify and assess NDMA's efficiency.

3. Theoretical Framework:

a. Effectiveness:

Components: Evaluate the functioning of NDMA's sub-systems, including early warning systems, disaster response teams, communication channels, and coordination mechanisms.

Metrics: Assess the timeliness and appropriateness of response, the extent of damage mitigation, and the overall impact on affected communities.

Indicators: Response time, casualty reduction, successful evacuations, and effectiveness of recovery and rehabilitation efforts.

b. Relevance:

Components: Examine the alignment of NDMA's policies, procedures, and initiatives with national and international disaster management standards.

Metrics: Analyse the adaptation of NDMA to evolving disaster patterns, changes in climate, and advancements in disaster management technologies.

Indicators: Alignment with international disaster management frameworks, integration of new technologies, and responsiveness to emerging threats.

c. Efficiency:

Components: Evaluate the allocation and utilization of resources, including financial, human, and technological resources.

Metrics: Assess the cost-effectiveness of NDMA's activities, resource optimization, and the organization's ability to achieve desired outcomes with minimal resource inputs.

Indicators: Resource allocation efficiency, cost per life saved, and the overall economic impact of disaster management efforts.

The proposed theoretical framework integrates systems theory, institutional theory, and performance measurement theory to create a comprehensive evaluation framework for NDMA. By assessing effectiveness, relevance, and efficiency, this framework provides a holistic understanding of NDMA's performance, facilitating informed decision-making and continuous improvement in disaster management strategies.

CHAPTER 3

METHODOLOGY

For this research, a qualitative research strategy has been used. The qualitative design empowers investigators to conduct a complex investigation of the elaborative phenomenon within a precise framework. According to Alok and Mishra (2017), qualitative research is responsible for bringing up the in-depth analysis of non-numeric data. For this research, qualitative design is to identify significant patterns that are descriptive of a certain occurrence through analysing and interpreting text, interviews, and observations (Auerbach, 2007).

3.1 Research Strategy:

Utilizing case study research for the evaluation of an institute like NDMA can be a robust and effective approach because case studies offer a thorough insight into an institution's operation by allowing for an in-depth examination of its practises, procedures, and results. This approach allows one to assess an institute like NDMA since it enables researchers to delve into the nuanced elements of the institute's environment, strategy, difficulties, and triumphs. By conducting interviews, observations, and analysing documents, a case study captures the complex interplay of factors that influence an institute's performance. This approach is especially beneficial for generating rich qualitative data that can reveal nuances and insights that quantitative methods might miss. Overall, the case study design offers a holistic view of the institute under evaluation, facilitating a deeper comprehension of its strengths, weaknesses, and potential areas for improvement.

For a robust research strategy, I considered adopting a case study approach similar to Yin's methodology. I began with a comprehensive literature review to identify gaps and theoretical frameworks. I then employed purposive sampling to select cases relevant to my study's objectives. I incorporated multiple data collection methods, such as interviews, document analysis, and observations, ensuring a triangulation of sources for data validity. I developed a detailed case study protocol for consistency. Throughout the research, I tried to maintain a focus on pattern-matching and cross-case synthesis for analytical precision. This strategy, inspired by Yin's case study design, provides a systematic and holistic approach to address the research questions (Yin, 2018).

3.2 Research Design:

Here I have applied a single case study approach for the comprehensive evaluation of NDMA, because this approach focuses on an in-depth exploration of a single institute, allowing for a thorough examination of its intricacies, dynamics, and contextual factors. In my research study, employing a single case study design offered an in-depth exploration of the National Disaster

Management Authority (NDMA) in Pakistan. This approach allows for a comprehensive analysis of a singular entity, facilitating a detailed understanding of its structure, processes, and performance (Yin, 2018). By focusing on NDMA as a unique case, I could delve deeply into the intricacies of its disaster management strategies, policies, and the challenges it faces. The single case study design provided me with an opportunity for nuanced insights that might not be achievable through broader, comparative approaches.

3.3 Sampling:

Purposive sampling has been used in this research. For this research, purposive sampling has opted to get insight from key informant interviews where its strategic selection of participants is based on their expertise, knowledge, and relevance to the research objectives. In the context of my research study, purposive sampling emerged as a careful choice for participant selection. This intentional sampling method allowed me to deliberately choose participants who possessed information-rich experiences or perspectives related to disaster management and the role of NDMA in Pakistan. By selecting key informants, experts, or individuals directly involved with NDMA, purposive sampling ensured that the chosen participants could provide in-depth insights into the specific dimensions under investigation (Palinkas et al., 2015). This targeted approach aligned with the qualitative nature of my study, facilitating a nuanced exploration of the subject matter.

3.4 Snowball Technique:

In my research study, the snowball sampling technique has been employed as an effective strategy for identifying and recruiting participants. This non-probability sampling method involved initially selecting a few key informants or participants who had relevant knowledge or experience related to NDMA and disaster management in Pakistan. After interviewing or engaging with these initial participants, I asked them to refer other individuals who might contribute valuable insights to the study. This iterative process continues, creating a "snowball" effect as the sample size expands through referrals (Biernacki & Waldorf, 1981). Snowball sampling is particularly useful when studying populations that may be challenging to access through traditional sampling methods and when building a network of participants with diverse perspectives is essential.

3.5 Limitations:

Initially, I was determined and aimed to conduct interviews with the NDMA officials whereas I conducted 1 interview with them. A respondent from NDMA suggested that I should interview organizations and people other than NDMA to get an objective and unbiased evaluation of NDMA. Through the snowballing technique, I could manage to contact people, who are

considered to be the stakeholders of NDMA. The research questions of my thesis are covered by the NDMA officials whereas the different questionnaires were designed for academia, media, NGOs and IOs. So, I managed to take one interview from NDMA and the rest from the organizations they had pointed out. I faced challenges in contacting provincial disaster management units and individuals in academia, with no responses received. Efforts to engage with the PA to DG-Rescue 1122 Punjab resulted in a commitment for an interview. However, attempts to reach out to university rectors and VCs were unsuccessful. In total, only 7 to 8 responses were obtained, with 4 from the United Nations, 2 from the media, 1 from NDMA, and 1 from academia. The difficulties in securing responses highlight the constraints of engaging with busy stakeholders for the research.

3.6 The Procedure of Data Collection:

After determining the stakeholders, data collecting began. I got in touch with these stakeholders' authorities. The interviewees' convenience was taken into consideration when choosing the interview day and time. I performed semi-structured interviews with the interviewees for 30 to 40 minutes. The interviews were conducted in both Urdu and English. I let the interviewees know in advance that I would only be asking English-language questions. They were free to respond in whichever language they chose. The verbatim of the interviews conducted in Urdu was translated into the Romanized English version of Urdu and then, using the back-translation process, into the English language (Ozolin et al., 2020).

Before the interviews, I took verbal consent from the interviewees to mention their details such as name, designation, and organization in the thesis and use their statements in the form of quotes in the analysis part of the research. The interview was audio recorded, translated or transcribed. I manually developed codes for themes and sub-themes using the interview data. Interviews are supposed to be one of the quite usual qualitative data-compilation methods, and they're a good method when you must collect highly tailored information. Conversational interviews are perfect for open-ended questions that permit you to achieve. This research study entailed key informant interviews with government officials, international organizations, donors, academia, media and the private sector. All of the above stakeholders were contacted. Key informant interviews are qualitative in-depth interviews with the masses who are familiar with the happenings around the community. The drive of key informant interviews is to gather information from a variety of people, -involving, professionals, community leaders, or residents- who possess immediate knowledge about the community. Key informant interviews are more like semi-structured interviews. So, the format of the interviews was semi-structured interviews. I have employed two modes to collect data which are telephonic and face-to-face

interviews.

I intended to conduct 10-15 interviews but could hardly get 8 interviews due to unavailability of respondents.

3.6.1 Units of Data Collection:

Units of Data Collection that were used in the research are as follows:

1. NDMA Management
2. Media Personnel
3. NGO and International Organizations
4. Academia

3.7 Data analysis technique for Interviews:

Thematic analysis technique was used in the research. The thematic analysis allows you a lot of elasticity in inferring the data and permits you to approach enormous data sets with much ease by arranging them into extensive themes. That is why it is the best method. I employed thematic analysis in a stepwise procedure. Initially, I familiarized the data, then assigned codes to the data to explain the content, and then I searched for the themes extracted from the codes taken from different interviews, then reviewed the themes, then defined and tagged the themes, and lastly, produced the report.

Alhojailan & Ibrahim (2012) state that, the most suitable method for any investigation that aims to find employing interpretations is thought to be thematic analysis. It adds a methodical component to data analysis. It enables the researcher to link a frequency analysis of a theme to a content study of the entire text. This will add precision and strengthen the overall meaning of the research. Qualitative research necessitates comprehending and gathering many elements and facts. The thematic analysis offers the chance to comprehend any issue's potential from a wider perspective. According to Braun and Clarke (2005), Thematic Analysis is swiftly gaining widespread acknowledgement as a distinctive and valuable approach, standing on par with established qualitative methodologies such as grounded theory, narrative analysis, and discourse analysis. As an accessible and adaptable method, Thematic Analysis is steadily growing in popularity for analysing qualitative data. Acquiring proficiency in Thematic Analysis equips qualitative researchers with fundamental skills that serve as a cornerstone for engaging with various other qualitative data analysis approaches.

3.8 Thematic Analysis:

For this thesis, I have employed thematic analysis to identify, analyse, and interpret patterns (themes) within textual or qualitative data as suggested by Braun and Clarke (2005). For this

here's a step-wise procedure for conducting thematic analysis:

1. Familiarization with Data:

I started by becoming familiar with my data which were the transcribed interviews. I read through the data several times to gain an understanding of its content and context.

2. Data Coding:

I began by generating initial codes, which were short labels or tags that captured key ideas, concepts, or patterns in the data. I coded the data systematically, segment by segment, using a consistent approach. I considered using both inductive coding (allowing themes to emerge from the data) and deductive coding (using pre-existing ideas or theories as a basis).

3. Initial Theme Generation:

I clubbed similar codes together to form initial themes. These themes represented patterns or recurring concepts in the data. The themes were descriptive, capturing the essence of the data they represent.

4. Review and Refinement:

I reviewed my initial themes and their corresponding codes to ensure accuracy and relevance. I refined the themes by clarifying their boundaries, merging similar ones, or splitting overly broad ones.

5. Define and Name Themes:

I defined each theme in clear, concise language. I gave each theme a meaningful name that encapsulated its content and significance.

6. Data Collation:

I organised the relevant coded data extracted under each theme. It helped in supporting the interpretation of themes and demonstrating their presence in the data.

7. Theme Review and Iteration:

I reviewed the entire set of themes and their collated data extracts to ensure their coherence and consistency. I checked if themes accurately reflected the data and if any adjustments were needed.

8. Theme Mapping:

I created a thematic map or diagram to illustrate the relationships between themes. It can help in visualising the overall structure of your analysis.

9. Data Interpretation:

I interpreted each theme concerning my research question or objectives. I considered their implications, meanings, and significance. I drew connections between themes and identified potential explanations or narratives.

10. Write-Up:

I documented my thematic analysis findings in a clear and organised manner. I described each theme, provided supporting quotes or examples from the data, and offered interpretations or explanations. I ensured that my findings addressed the research question and contributed to the broader understanding of the phenomenon.

11. Validation:

I considered seeking validation by discussing my findings with peers, colleagues, or participants to ensure that my interpretations were accurate and credible.

12. Report Writing:

I included the thematic analysis in my research report, thesis, or article. I presented the findings logically and transparently, making sure to provide sufficient context and evidence.

Thematic analysis requires careful attention to the data, a systematic approach to coding and theme generation, and a thoughtful interpretation of the identified themes. It allows researchers to explore the richness and complexity of qualitative data and gain insights into the underlying meanings and patterns within it.

CHAPTER 4

FINDINGS AND DISCUSSION

This chapter discusses the findings of this research study.

Comparison of National Disaster Management Authority (NDMA) Policies and Performance:

Table:1

NDMA'S Policies Verses NDMA's Performance:

NDMA's Policies:	NDMA's Performance:
1. Policy Framework	
<p>Prevention and Mitigation: NDMA emphasizes proactive measures to reduce disaster risks, including risk assessments, early warning systems, and community education.</p> <p>Preparedness: Policies focus on enhancing the readiness of response agencies, conducting drills, and developing comprehensive emergency response plans.</p> <p>Response and Recovery: Strategies for an effective and coordinated response, as well as plans for rehabilitation and reconstruction, are outlined in NDMA policies.</p>	<p>Strengths: The NDMA has demonstrated effectiveness in responding to disasters, particularly in mobilizing resources and coordinating relief efforts.</p> <p>Weaknesses: Challenges exist in the implementation of preventive measures, with delays in recovery and rehabilitation efforts after disasters.</p>
2. Institutional Coordination	
<p>Inter-Agency Coordination: Policies emphasize collaboration among government departments, NGOs, and international agencies throughout all phases of disaster management.</p>	<p>Strengths: There is progress in inter-agency coordination, evident in the establishment of the National Emergency Operations Centre (NEOC).</p> <p>Weaknesses: Despite improvements,</p>

<p>Capacity Building: NDMA policies include training programs to enhance the skills of personnel involved in disaster management.</p>	<p>challenges persist in the effective coordination of resources and information among various stakeholders.</p>
<p>3. Community Engagement</p>	
<p>Community-Based Disaster Risk Reduction: Policies stress the importance of involving local communities in disaster risk reduction efforts.</p> <p>Public Awareness: NDMA policies aim to educate the public about disaster risks, preparedness measures, and evacuation procedures.</p>	<p>Strengths: NDMA has initiated community-based projects and awareness campaigns, promoting local involvement in disaster preparedness.</p> <p>Weaknesses: Challenges remain in sustaining community engagement, especially in remote areas, due to limited resources.</p>
<p>4. Technological Integration</p>	
<p>Early Warning Systems: Policies emphasize the development and maintenance of effective early warning systems utilizing technology and real-time data.</p> <p>Geospatial Technology: NDMA policies advocate for the use of geospatial technology for risk assessment, mapping, and efficient resource allocation.</p>	<p>Strengths: NDMA has made strides in implementing early warning systems, particularly for floods, and integrating geospatial technology for improved resource allocation.</p> <p>Weaknesses: Challenges persist in reaching remote areas with technological interventions due to resource constraints.</p>
<p>5. Legislative Support</p>	
<p>Legal Framework: NDMA policies stress the need for a robust legal framework to empower the authority, define roles, and facilitate effective disaster management.</p>	<p>Strengths: The NDMA Act of 2010 provides a legal basis for the authority's operations, defining its roles and responsibilities.</p> <p>Weaknesses: Challenges include gaps in coordination between national and provincial levels, affecting the enforcement of regulations.</p>

6. International Collaboration	
<p>International Cooperation: NDMA policies highlight the importance of collaboration with international agencies, sharing best practices, and seeking support during large-scale disasters.</p>	<p>Strengths: NDMA has effectively engaged with international organizations and donors during major disasters, facilitating resource mobilization and technical assistance.</p> <p>Weaknesses: Ongoing challenges include ensuring sustained collaboration and effectively leveraging international expertise in long-term disaster risk reduction initiatives.</p>

While NDMA policies reflect a comprehensive approach to disaster management, there are challenges in translating these policies into effective on-the-ground actions. Addressing weaknesses in policy implementation, institutional coordination, and community engagement is crucial for enhancing NDMA's overall performance and ensuring a more resilient and responsive disaster management system. Regular evaluations and adjustments to both policies and operational strategies are necessary to adapt to evolving disaster scenarios and improve outcomes.

This chapter discusses the findings of this research study. A total of 17 themes and 21 sub-themes emerged from the thematic analysis of the data. The research questions stated earlier are addressed within these themes and sub-themes that emerged from interviews with stakeholders involved in the evaluation of NDMA with respect to disaster management.

Interview Findings

Table.2

Respondents Details.

Most of the respondents chose to remain anonymous. They did not provide the consent to reveal their identity.

Table 2 Respondent Details-Units of Data Collection

Name	Age	Designation	Organization
Respondent 1	40-45	Resident Coordinating	UN

		Officer	
Respondent 2	35-40	N/A	UN
Respondent 3	40-45	N/A	UN
Respondents 4 and 5	30-35	Did not provide the consent to reveal their designation	Media They did not provide the consent to reveal the media outlet
Respondents 6 and 7	35-40	Assistant Professor	Academia Peshawar University
Respondent 8	35-50	Deputy Directors	NDMA

Table: 3

4.1 Themes

Table 2 Themes and Sub-Themes

Themes	Sub-Themes
Disaster Risk Governance and Disaster Risk Management	
Role and Functioning of the National Disaster Management Authority (NDMA) in Pakistan.	
Effective Management of the Disaster, the Collaborative Efforts of Multiple Organizations and Stakeholders.	
Importance of emergency response and disaster risk reduction	

Financial Limitations Faced by the NDMA, the Reliance on External Funding Sources	Challenges Faced in Implementing Targets and Plans Due to Limited Financial Resources, Donor Preferences, and Fluctuating Political Priorities
NDMA's Approach to Institutional Capacity Building and Collaborative Efforts	Institutional Framework and the Role of District Managements (DMs) in Disaster Risk Management (DRM) in the Government Sector. Reliance Patterns in Disaster Management: Examining the Role of National, Sub-National, and District Levels Resilience and Challenges at the Local Level in Disaster Management
Enhancing Community-Level Development for Effective Disaster Management.	Strengthening the Functionality of Local Administration in Monsoon Contingency Planning. Mainstreaming Risk Reduction into Development Planning
Collaborative Stakeholder Engagement for Resilient Disaster Management	
Engagement with International Organizations and NGOs	
Experience of Collaboration	
Areas of Strength and Improvement	Limited Media Communication in Regular Days Effectiveness of Communication Timeliness of communication, Transparency, and Availability of Information

Collaboration with Media Outlets	Accessibility for Media Inquiries Accuracy and Reliability of Information Addressing Misinformation
Media Engagement for Awareness	Media Perceptions of NDMA Recommendation for Improvement
Strengths and Weaknesses in NDMA's Disaster Management Strategies and Policies	
Incorporation of Scientific Research and Evidence-based Approaches	Collaboration between NDMA and Academic Institutions Evaluation of NDMA's Disaster Management Initiatives Recommendations and Best Practices
Engagement with Academia and Leveraging Expertise:	Collaborative Research Projects Capacity Building and Technical Expertise
Role of Academia in Disaster Response and Recovery:	Academic Studies on Impacts of Disasters Academia and Emerging Challenges
The Relevance, Effectiveness, and Efficiency of NDMA:	

4.2 Interview Themes and Findings:

Theme 1. Disaster Risk Governance and Disaster Risk Management.

The research findings reveal that the officials at NDMA explained in detail the programmes they have initiated and developed and the parameters that they consider guidelines to drive the NDMA. While talking about governance risk reduction, the second priority area of the Sendai Framework takes up disaster risk governance. Respondent 1 commented,

“Our concept of governance lies under the legislation and policy landscape, which is termed

as governance. It tells the institutional setup, and through which policy guidelines, NDMA drives its responsibility and roles.”

Whereas disaster risk management is one of the components in governance whereas in its spectrum, there comes a lot more things. For instance, we talk about risk reduction, awareness, investment, fiscal resilience, and risk knowledge, they all are the components of disaster risk management. While talking about the nature of disasters, he said that hazards are natural, but disasters are manmade because they happen due to incapacity a hazard converts into a disaster. He said that, *“we can manage the risk, we cannot stop the flood, we cannot stop heavy rainfall.*

We cannot stop the earthquake, but the risk and vulnerability associated with that can be limited.”

The analysis of the provided content reveals several key points regarding the programs and initiatives of the National Disaster Management Authority (NDMA) and their approach to disaster risk governance. The official at NDMA explains that they have developed various programs and initiatives, guided by specific parameters, to drive their organization.

The content highlights that disaster risk governance is considered the second priority area of the Sendai Framework, which is a global agreement for disaster risk reduction. The respondents emphasize that their concept of governance is grounded in legislation and policy, which form the institutional framework for NDMA's responsibilities and roles.

The distinction between disaster risk management and governance is clarified. Disaster risk management is viewed as a component of governance, encompassing various elements such as risk reduction, awareness, investment, fiscal resilience, and risk knowledge. These components collectively contribute to managing the risks associated with disasters.

Furthermore, the nature of disasters is discussed, with the official stating that hazards are natural occurrences, while disasters are manmade. The transformation of a hazard into a disaster is attributed to human incapacity. It is acknowledged that it is impossible to prevent natural hazards like floods, heavy rainfall, or earthquakes. However, the focus lies on managing the risks and vulnerabilities associated with these events to limit their impact.

Overall, the analysis emphasizes the importance of governance in disaster risk reduction and management. It underscores the role of legislation, policies, and institutional frameworks in guiding NDMA's initiatives, as well as the need to address the various components of disaster risk management to effectively mitigate risks and vulnerabilities.

Theme 2. Role and Functioning of the National Disaster Management Authority (NDMA) in Pakistan.

This theme tries to respond the research question number 1 whether the NDMA has been successful in carrying out its mandate or not. The findings tell us that the NDMA Act 2010 and NDMA's mandate are a policy-making platform. NDMA Act made a National Disaster Management Commission, which is chaired by the prime minister of Pakistan. There is a wider bench of leadership where there is a leader of the opposition, both houses, key ministries, chiefs of armed forces, provincial representation, and civil society members into that commission are there. It is the apex body of policymaking in the country. NDMA acts as an implementing body for the decisions. Technically speaking NDMA is not a lead response agency, the response is delegated to the provinces and district authorities who have a presence on the ground level.

“Theoretically NDMA would activate if any disaster is out of control of a province or beyond the capacity of that province. Then the province will request the NDMA, and the NDMA will move in and would play a facilitating and supporting role. From another perspective, our ground situation is that our PDMA's and DDMA's capacity is to well manage localized disasters but in massive disasters like last year's disasters, 3 to 4 provinces went into a spell of destruction, thus NDMA automatically kicks in. The NDMA coordinates with donors and aid distribution. In last year's example, our emergency response was a very successful one, in that we managed it timely, evacuations, and did what was needed. There were still some ups and downs and some pros and cons but still, there was timely operation. “

The analysis of this excerpt focuses on addressing research question number 1, which pertains to the success of the National Disaster Management Authority (NDMA) in fulfilling its mandate. The findings indicate that the NDMA Act of 2010 established the NDMA as a policy-making platform. The Act also created the National Disaster Management Commission, which is chaired by the Prime Minister of Pakistan and comprises a diverse group of leaders from various ministries, armed forces, provincial representation, and civil society members.

It is highlighted that the NDMA primarily acts as an implementing body for the decisions made by the National Disaster Management Commission. It is not the lead response agency but delegates, responsibilities to provinces and district authorities, which have a presence at the ground level.

The role of the NDMA is described in situations where a disaster goes beyond the control or capacity of a province. In such cases, the province can request the NDMA's intervention, and the NDMA would step in to provide support and facilitation. The coordination of donors and aid distribution is mentioned as one of the NDMA's responsibilities. The analysis acknowledges that while the capacities of Provincial Disaster Management Authorities (PDMA) and District Disaster Management Authorities (DDMA) are generally sufficient for managing localized disasters, in the case of massive disasters affecting multiple provinces, the NDMA automatically becomes involved.

The content states that the emergency response of the NDMA during the previous year's disasters was considered successful. Timely evacuations and necessary actions were taken, although there were some challenges and drawbacks. Despite these limitations, the overall operation was deemed timely.

In summary, the analysis suggests that the NDMA primarily functions as a policy-making platform, and its role in disaster response is activated in situations where a disaster surpasses the capacity of a province. The NDMA's success in fulfilling its mandate is evident in its coordination of emergency response efforts, including aid distribution and timely operations. However, it acknowledges that there were still some areas for improvement and challenges during the response.

Theme 3. Effective Management of the Disaster, the Collaborative Efforts of Multiple Organizations and Stakeholders.

This theme takes up research question number 2 which talks about the quality-of-service delivery provided by NDMA. Although there is always a margin for improvement in everything in general, the last disaster was managed excellently. Where we needed it, we engaged the rest of the people and entities. The level of last year's disaster was not an issue to be handled by a single organization or a government organization, but it was dependent on the well-functioning of the overall system was developed on an ad-hoc base upon which each department played its role efficiently. When I intervened about the question of the other agencies who assisted the NDMA, they replied that, besides NDMA and PDMA, a key role of the Ministry of Foreign Affairs, because they are the ones who manage and deal with donors and bilateral governments. A Crisis Management Cell and Unit were established which deal with emergencies. That cell used to tell us that such and such offer is available from such and such country and then he said that they tell them about what is needed and what is not whereas logistics were done by NDMA. Pakistan Army played a crucial role in

especially logistics and distribution of relief and then the health department, and Pakistan Meteorological Department (PMD) for forecasting, and weather prediction, it was a collective effort, in which the Ministry of Finance, and Economic Affairs Division were there. They are the one who mobilizes the funds. This time planning and development were leading these efforts of response, so there were some stakeholders in it.

The analysis of this research finding focuses on research question number 2, which addresses the quality-of-service delivery provided by the National Disaster Management Authority (NDMA). The findings suggest that, in general, the NDMA managed the last disaster excellently, indicating a high level of service delivery. The content emphasizes that the magnitude of the disaster required the engagement of various entities and individuals, as it was not a task that could be handled solely by a single organization or government entity. Instead, the overall system developed on an ad-hoc basis, played a crucial role, with each department efficiently fulfilling its responsibilities.

Regarding the assistance provided by other agencies to the NDMA, the Ministry of Foreign Affairs is highlighted for its role in managing and dealing with donors and bilateral governments. A Crisis Management Cell and Unit were established to handle emergencies. The cell informed the NDMA about available offers from different countries, and the NDMA communicated the specific requirements. Logistics were managed by the NDMA, and the Pakistan Army played a crucial role in logistics and relief distribution. Additionally, participating were the Departments of Health and the Pakistan Meteorological Department (PMD), which offered services like forecasting and weather prediction. Fundraising fell within the purview of the Economic Affairs Division and the Ministry of Finance. Additionally, the planning and development sector led the response efforts, indicating the involvement of various stakeholders.

Overall, the analysis suggests that the NDMA's service delivery during the last disaster was of high quality. The engagement of multiple entities, including government departments, the military, and international partners, demonstrates a collective effort to address the disaster effectively. The involvement of various stakeholders highlights the coordinated approach taken to ensure successful service delivery in response to the disaster.

Theme 4. Importance of Emergency Response and Disaster Risk Reduction.

This theme undertakes research question number 3 which talks about the significant role of NDMA in managing disasters. The research findings according to the NDMA officials, said that they do emergency response at any cost. Besides that, there is a national disaster risk

reduction policy of 2013, according to that, our important function is risk reduction Multi-Hazard Vulnerability Risk Assessment (MHVRA). It is a global practice, and we also believe that without Risk Knowledge, we do not know how to manage risk. For example, there is a threat of Glacial Lake Outburst Flood (GLOF) in Chitral, and if we don't have risk knowledge

of what sort of risk is *prevailing there, we won't be able to do any intervention there. They commented that.*

“MHVRA is a tool which NDMA applies when we go to the district level, Tehsil Level, and till UC Level, we go and identify what sort of risk is there at this area. Then according to that risk, we would take measures and initiatives. Similarly, in the coastal belt, there is a risk of tsunami, then we will do the tsunami focussed interventions there.”

The responder said that risk knowledge is the basic tool based on which you do your decision-making. Calamity-based intervention is done. Similarly, there was a project named Karachi Transformation Project to look into the monsoon spell, NDMA was determined to open the existing drainage outlets and naalaas, so a marked difference was observed this time, that the level of destruction in Karachi was comparatively lower than it used to be before. A disaster risk reduction measure was taken so that it could withstand the high level of rain. So, it is evident that NDMA has a crucial role in disaster risk reduction.”

The analysis of this content focuses on research question number 3, which examines the significant role of the National Disaster Management Authority (NDMA) in managing disasters. The findings indicate that according to NDMA officials, they are committed to emergency response efforts regardless of the costs involved. The National Disaster Risk Reduction Policy of 2013, which emphasizes the value of risk reduction, particularly through the application of a Multi-Hazard Vulnerability Risk Assessment (MHVRA), is also mentioned by the officials. The officials stress that effective risk management is impossible without a thorough grasp of the hazards involved.

The MHVRA is described as a tool utilized by the NDMA to assess risks at various levels, ranging from district to tehsil and union council (UC) levels. By identifying the specific risks present in each area, the NDMA can take appropriate measures and initiatives accordingly. The content further illustrates the importance of risk knowledge as the fundamental basis for decision-making. Calamity-based interventions are emphasized, highlighting the NDMA's approach to addressing risks based on the specific vulnerabilities and hazards present in a given area.

The research provides an example of the Karachi Transformation Project, which aimed to mitigate the impact of monsoon spells in the city. The NDMA focused on opening existing drainage outlets and naalas (drainage channels) to improve water flow and reduce the level of destruction caused by heavy rainfall. The success of this project is cited as evidence of the NDMA's crucial role in disaster risk reduction.

Overall, the analysis suggests that the NDMA plays a significant role in managing disasters through its commitment to emergency response and its implementation of risk reduction measures. The utilization of tools such as MHVRA and the emphasis on risk knowledge highlight the NDMA's proactive approach to understanding and addressing specific risks at different levels. The example of the Karachi Transformation Project further illustrates the NDMA's efforts to mitigate the impact of disasters through targeted interventions.

Theme 5. Financial Limitations Faced by the NDMA, the Reliance on External Funding Sources.

This theme responds to the interview question about the availability of funds. The responders said that the availability of funds is a big question mark. The respondent said he won't comment on it a lot. I was told that they are at a lower tier of the country. Funds are limited to them. The total value of the NDMA Plan calculated was 1 billion, but they revised it in the middle, and it became 2 billion dollars, unfortunately, they couldn't get enough amount that they could implement funding for the most important challenge that they had to face almost always. There has been a reactive approach to funds. The responder commented,

“Whenever a disaster strikes the donors release the funds then. We have a very extensive network of warehouses country-wide. We try to stock up so that if an emergency hits, we can help up to .5 million people on our own, without getting any aid from outside. If additionally, any need would be there, we would go for National Disaster Management Fund (NDMF). If we have a greater need, then we go to the Ministry of Finance to ask them to release the funds. If we just talk about DRR, we can say that we do not get financed enough, which is our requirement.”

The National Disaster Management Authority's (NDMA) access to funding is the subject of this content analysis. The respondents say that having access to money is a big worry, especially given that they think of themselves as being in a lower socioeconomic bracket. They mention that their operational budget is constrained. The NDMA Plan's estimated value was originally pegged at \$1 billion, but it was later increased to \$2 billion. Sadly, they were unable to obtain enough financing to completely carry out the plan, which is essential for

resolving the most significant difficulties they confront.

The content highlights a reactive approach to funding, where donors release funds when a disaster occurs. To stock up on goods so that it can assist up to 500,000 people without the need for outside assistance, the NDMA has established a massive network of warehouses across the country. The National Disaster Management Fund (NDMF) offers further help if it is required. They approach the Ministry of Finance and inquire about funding when there is a bigger need.

The analysis shows that respondents remark that they do not receive enough funding, specifically for disaster risk reduction (DRR), to meet their needs. This implies a gap between the available funds and the necessary resources to effectively address disaster risks and implement DRR measures.

5.1 Challenges Faced in Implementing Targets and Plans Due to Limited Financial Resources, Donor Preferences, and Fluctuating Political Priorities.

The research findings in the subtheme discuss that part, of the targets have been implemented. We have worked with multiple donors, UN Agencies, and bilateral development partners. If we talk about our targets we had to do a risk assessment of the whole country as it was a very massive funding, so this budget is not being achieved. The respondent said that as another example of it, they had to, aim to construct a state-of-the-art National Emergency Response Operation Centre, which is under construction now. So, it is happening with the help of donors.

It depends on the activity which a donor likes, then the donor agrees to fund. They said that they are still lagging as per their plans. NDMP 2010, due to not enough financial resources, most of the plans could not be fulfilled. There comes most of the other factors like political priorities are there after a disaster is struck, and then the government recalls the disaster risk management. They further said that after some time, they forget the matter and the next disaster hits. According to them, commitment is lacking on a government level, which should be there.

The analysis of this content highlights the implementation of targets and the challenges faced by the National Disaster Management Authority (NDMA) in achieving them. The findings indicate that the NDMA has collaborated with multiple donors, UN agencies, and bilateral development partners. However, in terms of target implementation, there are issues related to funding. The respondent mentions that due to the massive funding required for conducting a risk assessment of the entire country, the budget for this purpose has not been achieved.

An example is provided of the construction of a National Emergency Response Operation Centre, which is currently underway with the support of donors. The availability of funding depends on the donor's interest in a particular activity, and they agree to provide funds accordingly. However, despite these efforts, the NDMA is still lagging in terms of its plans. The limited financial resources have hindered the fulfilment of many aspects of the National Disaster Management Plan (NDMP) 2010. The content also highlights other factors that contribute to the challenges faced by the NDMA. It is mentioned that political priorities tend to shift after a disaster strikes, with the government focusing on immediate response and recovery efforts. When the next calamity strikes, these issues might eventually be forgotten. The government's lack of continued commitment is one of the biggest issues.

One of the main problems is how uncommitted the administration has been. The dependence on donor funding and the shifting political priorities contribute to the difficulties in implementing the plans effectively. The lack of sustained commitment on the government level is seen as a factor that hampers progress in disaster risk management and the fulfilment of the NDMP. The research findings under this theme also tell that where challenges and hurdles are concerned, financial resources are on top. To some extent, there might be a lack of technical capacity and trained HR, there we also lack. NDMA strength according to HR, is what it should be, it is not enough.

Theme 6. NDMA's Approach to Institutional Capacity Building and Collaborative Efforts.

The theme emerged undertakes the question of institutional capacity and research findings tell that when NDMA needs to respond, we call Rescue 1122 Punjab. If the need exceeds the limit, then they call the Pakistan army. If the scale of the disaster is greater than a single government entity would be able to handle it on its own. National Logistics Cell (NLC) was hired but it was out of its scope, so then we had to go to the World Food Program for logistic arrangements. They said that they had contacted private contractors to enhance the capacity on an ad-hoc basis, so this way, demand, and challenges were met. They said that they require external help while dealing with the disaster. On an ad-hoc basis, demands and challenges were met. NDMP assigned duties to humanitarian partners like the UN and other international agencies.

The analysis of this content focuses on the institutional capacity of the National Disaster Management Authority (NDMA) and its collaboration with various entities during disaster response. The research findings indicate that when the NDMA needs to respond to a disaster, they first call Rescue 1122 Punjab. If the scale of the disaster exceeds their capacity, they

then seek assistance from the Pakistan Army. This demonstrates a hierarchical approach to response, with different entities being involved based on the magnitude of the disaster.

In cases where the disaster is even larger and goes beyond the capabilities of a single government entity, the NDMA seeks external assistance. The National Logistics Cell (NLC) was initially engaged, but when their scope was exceeded, the NDMA had to approach the World Food Program for logistic arrangements. Additionally, private contractors were contacted on an ad-hoc basis to enhance capacity and meet the demands and challenges posed by the disaster. This highlights the NDMA's flexibility in seeking external help and engaging different partners to address the specific requirements of a given situation.

The content emphasizes that the NDMA requires external assistance to effectively deal with disasters. The involvement of humanitarian partners such as the United Nations (UN) and other international agencies is mentioned, with specific duties assigned to them as part of the National Disaster Management Plan (NDMP).

Overall, the analysis suggests that the institutional capacity of the NDMA is augmented through collaborations and partnerships with various entities during disaster response. The hierarchical approach in engaging different organizations based on the scale of the disaster allows for a coordinated and effective response. The NDMA's ability to adapt and seek external assistance demonstrates a recognition of the need for additional resources and expertise to address the challenges posed by disasters.

6.1 Institutional Framework and the Role of District Managements (DMs) in Disaster Risk Management (DRM) in the Government Sector.

The subtheme that emerged addresses the question of the institutional framework and research findings tell that DRM works opposite in direction in the government sector. Respondent 1 replied that district management is the first tier, and they call them first responders. They are on the ground, and they can move first. It is pertinent for them to have the capacity to deal with a disaster. After that, there comes the provincial which supports the districts. DDMA's report to PDMA's whereas PDMA's direct reports to respective chief minister provincial authority. They do not report to NDMA. NDMA is an overarching policy-making platform that issues directions and guidelines. NDMA can guide but cannot force provinces because they do not report to us. In this matter, provinces have this autonomy in how they will manage the risk.

The analysis of this content focuses on the institutional framework of disaster risk management (DRM) and the roles and relationships between different levels of government.

The research findings indicate that the responder highlights the reverse direction of DRM in the government sector. They mention that at the district level, District Managements are considered the first responders who are responsible for taking immediate action during a disaster. These district-level entities are expected to have the capacity to effectively deal with disasters.

At the provincial level, Provincial Disaster Management Authorities (PDMA) support the districts. The PDMA directly reports to the respective chief minister of the province, and the District Disaster Management Authorities (DDMA) report to the PDMA. It is mentioned that the PDMA does not report to the National Disaster Management Authority (NDMA), and the provinces have autonomy in managing disaster risks.

The content highlights the role of the NDMA as an overarching policy-making platform that issues directions and guidelines. While the NDMA can provide guidance, it does not have the authority to force the provinces to comply, as they do not directly report to the NDMA.

Overall, the analysis suggests that the institutional framework for DRM follows a decentralized approach, where districts and provinces have specific roles and responsibilities. The districts are considered first responders, and the provinces provide support to the districts. The NDMA plays a policy-making role but does not have direct control over the provinces. The autonomy of the provinces in managing disaster risks is emphasized.

6.2 Reliance Patterns in Disaster Management: Examining the Role of National, Sub-National, and District Levels.

The sub-theme addresses the question being asked about the reliance pattern at the national, sub-national, and district levels. The research finding tells that there is an opposite scenario. The responder commented that, theoretically reliance is more on NDMA.KP districts are strengthened. They have made Disaster Management Units (DMUs). DDMA is not functional in the rest of the provinces at the level it should be. DDMA's are the main body that could take up the Community Based Disaster Risk Management (CBDRM) and resilience aspect, a district

itself can tackle and handle it better. In case of disaster, most of the reliance comes on the NDMA and the NDMA must support the PDMA. Respondent 1 said that they must manage the aid, so reliance becomes greater on NDMA.

The analysis of this content focuses on the reliance pattern at different levels of disaster management, including the national, sub-national, and district levels. The research findings

indicate an opposite scenario compared to the theoretical expectations. The responder mentions that theoretically, there is more reliance on the National Disaster Management Authority (NDMA). In Khyber Pakhtunkhwa (KP) districts, there has been a focus on bolstering the Disaster Management Units (DMUs), indicating some degree of sub-national dependence. District Disaster Management Authorities (DDMAs) in the remaining provinces, however, are not performing as well as they could. The DDMA is seen as the main body that can handle Community-Based Disaster Risk Management (CBDRM) and resilience aspects, suggesting that districts themselves are better equipped to handle these aspects. In case of a disaster, the responder mentions that most of the reliance falls on the NDMA, which then must support the Provincial Disaster Management Authority (PDMA). This reliance is specifically highlighted when it comes to managing aid, where the NDMA plays a crucial role.

Overall, the analysis suggests that there is a disparity between the theoretical reliance pattern and the actual scenario. While the NDMA is expected to be the primary entity for coordination and support, the focus on strengthening sub-national levels, particularly in KP districts, indicates a shift in reliance. The limited functionality of DDMAs in other provinces and the need for NDMA support in managing aid further emphasize the reliance on the national level.

6.3 Resilience and Challenges at the Local Level in Disaster Management.

This subtheme takes up the question of the resilience at local level. The research findings tell that if you talk about the local level, this is the mandate of the district. The respondent 1 commented that the primary responsibility is with the provinces and districts. Every district's vulnerability and risk depend on the donor. DDMA's capacity is dependent on the donor. Their vulnerability and risk are measured by the availability of the donor. They said that they call it mismanagement as no uniform set pattern is visible.

The analysis of this content focuses on resilience at the local level and the role of districts in disaster management. The research findings indicate that the primary responsibility for resilience lies with the provinces and districts. The respondent highlights that at the local level, the capacity of the District Disaster Management Authorities (DDMAs) is dependent on the

availability of donors. The vulnerability and risk of each district are measured based on the donor support they receive. This suggests that the capacity of DDMAs and their ability to build resilience is influenced by the availability of resources from donors. The responder

expresses concern about this situation, referring to it as mismanagement. The lack of a uniform set pattern or consistent approach to building resilience at the local level is mentioned.

Overall, the analysis suggests that there are challenges in achieving resilience at the local level. The reliance on donor support and the varying levels of resources available to different districts can lead to inconsistent approaches and capacity-building efforts. The mention of mismanagement implies a need for more standardized and sustainable approaches to building resilience at the local level.

Theme 7. Enhancing Community-Level Development for Effective Disaster Management.

This theme addresses the question of what is needed to reform community-level development. The research findings say that yes there is a need to reform community-level development with

respect to disaster management. The respondent commented that, if they look at it on-ground, the standard and condition is not a uniform standard of every district. The district where a donor has got involved, you will see an improvement. Whereas such a district, where a donor does not feel any need to do intervention, you will not see any capacity and capability in it. They added that there is a need to bring such interventions across the board where all the districts or local level's resilience must be improved. Resources must be provided on a local level or a community level. Moreover, training should be given to the people to identify the risks, how to mitigate them, and how to reduce them. A community must help themselves to get a timely response.

The analysis of this content focuses on the need for reforming community-level development in the context of disaster management. The research findings indicate that there is indeed a need for such reform.

The responder mentions that when looking at the ground reality, there is a lack of uniform standards and conditions across districts. The presence of a donor can lead to improvements in a district, whereas in districts where donors do not see a need for intervention, there is a lack of capacity and capability. This highlights the uneven distribution of resources and support, which hampers community-level development in disaster management.

The respondent emphasizes the need to bring interventions that improve resilience across all districts and local levels. To promote development, resources should be made available at the neighbourhood or community level. Additionally, community members should receive

training to aid in risk identification, mitigation, and appropriate action. The goal is to equip communities with the resources they need to be proactive and aid in quick emergency responses.

Overall, the analysis suggests that reforming community-level development in disaster management is necessary. It requires addressing the disparities in resource allocation, providing local-level resources, and equipping communities with the necessary knowledge and skills to actively participate in disaster risk reduction and response efforts.

7.1 Strengthening the Functionality of Local Administration in Monsoon Contingency Planning.

The subtheme takes up the question of the functionality of local administration. The research findings reveal that monsoon contingency planning for (3-4 months), NDMA does every year. Respondent 1 said that it is a very exhaustive exercise before the arrival of the monsoon. When the department gives them a seasonal forecast, on this bottom-up approach, that, firstly districts make their plans for how they will deal with the floods. Respondent revealed that the NDMA team feed its plans to provincial plans and provincial plans are accumulated then in a national contingency plan and an annual exercise they do every year. In this, local administration work and give their input and plan against heavy rainfall and flood. They also work in Thar. They do perform interventions, but the standard is not met yet.

The analysis of this content focuses on the functionality of local administration in the context of monsoon contingency planning. The research findings indicate that NDMA engages in an exhaustive exercise before the arrival of monsoon, involving a bottom-up approach.

According to the respondent, districts develop their plans based on the seasonal forecast provided by the department. These district plans are then fed into provincial plans, which are further consolidated into the national contingency plan. This annual exercise involves input from local administrations, particularly in dealing with heavy rainfall and floods. The responder mentions that the local administration also works in areas like Thar and performs interventions. However, it is noted that the standard is not yet met, suggesting that there are challenges or shortcomings in the implementation of the plans and interventions.

Overall, the analysis highlights the efforts made by local administrations in monsoon contingency planning. The involvement of local administrations in developing plans against heavy rainfall and floods is seen as a crucial aspect. However, the mention of standards not being met indicates a need for further improvements in the functionality and effectiveness of

local administration in addressing monsoon-related challenges.

7.2 Mainstreaming Risk Reduction into Development Planning.

The theme undertakes the question of normalising risk reduction into development. The research findings from respondent 1 reveal that since the inception of the NDMA, the team has been working on it. The respondent revealed that, if you look at the process of development and planning social initiative named CDWP-Central Development Working Party, all development projects are analysed, closely reviewed, and then approved for development funding. In 2009 or 2010, we made a DRR checklist NDMA shared it with the planning division and NDMA made this a part of that every development project will attach this checklist of DRR with that. Like Environment Impact Assessment (EIA), no project will be approved if you do not attach an EIA checklist. DRR checklist is there but now its enforcement and compliance is a big question mark.

The other initiatives include building codes in Pakistan. Pakistan Engineering Council (PEC) mandated the 2005 earthquake, and in 2007, NDMA added earthquake provisions that in a building, which sort of structure can withstand the earthquake activities. Fire safety provision was another initiative and element in the building codes of Pakistan. Another aspect of developmental planning is that NDMA modified the building codes of Pakistan with the Pakistan Engineering Council and added a provision which could improve our resilience. In 2010, Gender and Child Cells were established for vulnerable groups. In disaster planning, the gender and child rights must be protected. DDMA's were also asked to establish a GCC Cell. Several provinces replicated this and is still functional there.

The analysis of this content focuses on normalizing risk reduction into development and the various initiatives undertaken by NDMA in this regard. The research findings indicate that since the establishment of NDMA, efforts have been made to integrate risk reduction into development processes.

The respondent highlights the inclusion of a Disaster Risk Reduction (DRR) checklist in the Central Development Working Party (CDWP) process. This checklist is intended to be attached to every development project for review and approval. Like the Environment Impact Assessment (EIA), the inclusion of the DRR checklist has become a requirement for project approval. However, the enforcement and compliance of this checklist are mentioned as areas of concern. The analysis also mentions initiatives related to building codes in Pakistan. The Pakistan Engineering Council (PEC) mandated earthquake provisions in 2005, which were later added by NDMA in 2007. Fire safety provisions were also incorporated into the

building codes. These modifications aimed to improve the resilience of structures and enhance disaster preparedness. Furthermore, the establishment of a Gender and Child Cell (GCC) in 2010 is highlighted as an important aspect of developmental planning. The inclusion of gender and child rights in disaster planning is emphasized, and DDMA's were encouraged to establish GCC Cells. The replication of this initiative in several provinces indicates its ongoing functionality.

Overall, the analysis underscores the efforts made by NDMA to mainstream risk reduction into development processes. The inclusion of DRR checklists, modifications in building codes, and the establishment of a Gender and Child Cell are highlighted as key initiatives. However, concerns regarding the enforcement and compliance with DRR checklists are mentioned, suggesting the need for further attention in this area.

Theme 8. Collaborative Stakeholder Engagement for Resilient Disaster Management.

The theme addresses the question which discusses the role of stakeholders in disaster management efforts. Respondent 1 replied that disaster risk reduction is a thing, you need to do first-hand. The level of DRR which we take up, unfortunately, you won't see the level of DRM across the board. Some sectors are there where you have got enough tasks done but some are needed to. Every stakeholder should revise their responsibility and should work on resilience and risk reduction, where they need improvement because risk reduction is a collective effort. Unless and until everyone is working, the goal of a resilient Pakistan will not be achieved.

The analysis of this content focuses on the role of stakeholders in disaster management efforts. The respondent emphasizes the importance of disaster risk reduction (DRR) as a priority that should be addressed from the beginning. They acknowledge that the level of DRR implementation varies across different sectors, with some sectors making significant progress while others still requiring improvement.

The respondent highlights the need for all stakeholders to reassess their responsibilities and actively work towards enhancing resilience and risk reduction. They emphasize that achieving a resilient Pakistan requires collective efforts, with every stakeholder playing their part. The consequence is that unless all stakeholders are actively involved and committed to working towards it, resilience cannot be attained.

Overall, the analysis highlights the significance of stakeholder cooperation and group action in disaster management efforts. To provide a thorough and efficient approach to disaster management, it highlights the necessity for all stakeholders to prioritise and contribute to risk reduction and resilience-building programmes.

Theme 9. Engagement with International Organizations and NGOs.

The interview finding from respondent 2 suggests that NDMA engages effectively with international organizations and NGOs in disaster management efforts. It takes a leading role in coordinating disaster management across the country and provides visibility to these organizations and NGOs regarding the needs and requirements. Respondent said by answering the question when it is asked how does the NDMA engage with international organizations and NGOs in disaster management efforts? Then respondent stated, that NDMA engages very well with international organizations and NGOs. It leads disaster management efforts across the country and provides international organizations and NGOs with visibility on needs.

The findings from respondent number 3 suggest that NDMA does not actively engage in disaster management efforts with international organizations and NGOs. Its engagement is limited to coordination, ensuring that NGOs and IOs adhere to their plans or providing funds when necessary. This implies a more passive role for NDMA in terms of direct collaboration and engagement in disaster management. In an answer to the same question being asked from respondent number 2, respondent 3 commented that NDMA does not engage in disaster management efforts. It only reaches out for coordination to ensure NGOs and IOs respond as per their plans or if they require funds.

The interview findings from respondent number 4, highlight that NDMA engages with international organizations and NGOs in disaster management efforts through regular coordination and update meetings. These engagements occur quarterly or more frequently for ongoing projects or in response to disasters. Communication channels such as meetings, emails, calls, and messages are used to facilitate collaboration. The respondent replied that regular engagement with NDMA is done through coordination and update meetings every quarter or on ongoing projects on a monthly or weekly basis. When a disaster hits then special committees and groups are formed at all levels that meet daily. They engage through meetings, emails, and calls/messages.

The interview findings from respondent 5, highlight that NDMA engages with international organizations and NGOs in disaster management efforts through collaboration, resource sharing, and capacity building. This collaboration aims to foster effective response and mitigation efforts in dealing with disasters. It emphasizes the importance of knowledge exchange, policy development, and resource mobilization for more efficient disaster management. The respondent commented while answering the question that, the NDMA

engages with international organizations and NGOs in disaster management through collaboration, resource sharing, capacity building, and fostering effective response and mitigation efforts. This partnership facilitates knowledge exchange, policy development, and resource mobilization for more efficient disaster management.

The analysis of the content reveals different perspectives on how NDMA engages with international organizations and NGOs in disaster management efforts, as reported by the respondents. Respondent 2 suggests that NDMA engages effectively with international organizations and NGOs, taking a leading role in coordinating disaster management across the country. It provides visibility to these organizations and NGOs regarding the needs and requirements, indicating an active engagement in disaster management.

In contrast, respondent 3 presents a contrasting viewpoint, suggesting that NDMA's engagement with international organizations and NGOs is limited to coordination. The emphasis is on ensuring adherence to plans and providing funds when necessary, implying a more passive role in direct collaboration.

Respondent 4 highlights the regular engagement between NDMA, international organizations, and NGOs through coordination and update meetings. These engagements occur quarterly or more frequently, depending on ongoing projects or disaster response. Communication channels such as meetings, emails, calls, and messages are used to facilitate collaboration.

Respondent 5 emphasizes collaboration, resource sharing, and capacity building between NDMA, international organizations, and NGOs. The aim is to foster effective response and mitigation efforts in dealing with disasters. Knowledge exchange, policy development, and resource mobilization are seen as important components of this partnership.

Overall, the analysis highlights a range of perspectives on NDMA's engagement with international organizations and NGOs. While some suggest an active and effective engagement, others indicate a more limited role focused on coordination. Collaboration, resource sharing, capacity building, and policy development emerge as important aspects of NDMA's engagement with external stakeholders in disaster management efforts.

Theme 10. Experience of Collaboration.

The interview findings from respondent number 2 indicate that the overall experience of international organizations and NGOs in collaborating with NDMA has been positive. NDMA is clear about the areas where they require support and welcomes assistance.

However, there is a mention that NDMA prefers to use its mechanisms and reporting structures, which may not always align with the expectations of the collaborating organizations and NGOs. When asked the respondent about what the experience of international organizations and NGOs in collaborating with the NDMA has been, the interviewee revealed that the overall experience in collaborating with NDMA has been great. They are clear on the areas they need support in and welcome all the support. However, they like to use only their mechanisms and reporting structures, which don't always make sense.

The interview findings from respondent number 3 portray a mixed experience of international organizations and NGOs in collaborating with NDMA. It indicates that NDMA is not proactive in its engagement, and there is a need for organizations to actively pursue and engage with NDMA. The interaction with NDMA seems limited to meetings, and the level of engagement varies depending on individuals and personal efforts. This suggests that the experience of collaboration with NDMA may depend on individual relationships and efforts.

The respondent unfolded that NDMA is not very forthcoming, and we must run after them. The only time that they interact is during meetings. It depends on person to person and is on an individual basis.

The interview findings from respondent number 4 suggest that the experience of international organizations and NGOs in collaborating with NDMA has been positive. It emphasizes that working with NDMA has always been a good experience. The UN provides support as required to Provincial Disaster Management Authorities (PDMAs), and NDMA is aware and qualified. However, it is mentioned that NDMA requires capacity and resource support from time to time. The respondent revealed that it has always been a good experience working with NDMA. PDMAs require support that the UN provides as required. NDMA is aware and qualified, however, requires capacity and resource support from time to time.

The interview findings from respondent number 5 suggest that the experience of international organizations and NGOs in collaborating with the NDMA can vary. How well the collaboration functions depends on the kind of disaster, the success of the coordinating mechanisms, the coherence of the goals, and the degree of stakeholder cooperation. This demonstrates that a variety of outside influences may have an impact on the experience. The respondent revealed that the experience of international organizations and NGOs in working with the NDMA of Pakistan may vary depending on factors such as the type of disaster, the effectiveness of coordination mechanisms, the alignment of objectives, and the degree of cooperation between the stakeholders involved.

The analysis of the content highlights different experiences and perspectives regarding the collaboration between NDMA and international organizations/NGOs in disaster management efforts, as reported by the respondents.

Respondent 2 indicates a positive overall experience, stating that NDMA is clear about its support needs and welcomes assistance. However, there is a mention that NDMA prefers to use its mechanisms and reporting structures, which may not always align with the expectations of collaborating organizations and NGOs. Respondent 3 presents a mixed experience, suggesting that NDMA is not proactive in its engagement and that organizations need to actively pursue collaboration. The level of engagement seems to vary depending on individuals and personal efforts, indicating that the experience may depend on individual relationships.

Respondent 4 reports a positive experience, emphasizing that working with NDMA has been good. The UN provides support as required to PDMA, and NDMA is seen as aware and qualified. However, it is mentioned that NDMA requires capacity and resource support from time to time. Respondent 5 suggests that the experience of collaboration with NDMA can vary based on factors such as the nature of the disaster, coordination mechanisms, objectives alignment, and stakeholder cooperation. This implies that contextual factors play a role in shaping the experience.

Overall, the analysis reveals a range of experiences in collaborating with NDMA. While some respondents report positive experiences, highlighting clarity of support needs and effective engagement, others note challenges such as reliance on internal mechanisms or the need for the proactive pursuit of collaboration. The level of engagement, cooperation, and support required from NDMA may vary depending on the specific context and circumstances.

Theme 11. Areas of Strength and Improvement.

The interview findings from respondent number 2 highlight NDMA's strength in responding to disasters, indicating its experience and effectiveness in managing crises. However, it also suggests that there is room for improvement in disaster preparedness efforts. This implies a need for enhancing proactive measures to mitigate and prepare for disasters before they occur. When asked by the respondents about, what are the areas of strength and areas for improvement in the partnership between the NDMA and international organizations/NGOs, the respondents replied that the NDMA is well experienced in responding to disasters but still requires improved efforts in disaster preparedness.

The interview findings from respondent number 3 suggest that NDMA needs to improve its engagement with organizations, particularly by allowing them to fill gap areas in disaster management. It highlights the strength of NDMA in terms of its wide outreach, indicating its ability to reach a broad range of stakeholders. This suggests that NDMA's strength lies in its network and ability to connect with various organizations and stakeholders. The respondent answered that NDMA needs to engage more with organizations in terms of allowing them to fill gap areas. Their strength lies in the expansion of outreach.

The strengths of NDMA identified in the interview findings from respondent number 4 include its wide outreach and linkages with the armed forces, enabling it to provide first responders during emergencies. The presence of protocols and coordination mechanisms for emergency response is also noted. However, it is acknowledged that NDMA requires additional capacity and resource support, suggesting areas for improvement in terms of enhancing its capabilities. The respondent replied that the strengths of NDMA are its outreach, and linkages with the armed forces which allow it to provide the first response. They have protocols in place to respond to all emergencies. They also have coordination mechanisms in place to partner with international organisations. NDMA requires capacity and resource support.

The interview findings from respondent number 5 point out several areas that present challenges and gaps in the partnership between NDMA and international organisations/NGOs. These include a lack of political will, a shortage of trained construction workforce, inadequate monitoring and evaluation capacities for risk analysis and reduction, corruption, and a lack of apathy. The text suggests that international organisations can contribute to addressing these challenges by working on policymaking, contingency plans, and construction mechanisms in partnership with NDMA. The respondent revealed that there is a lack of political will, a lack of trained construction workforce, lack of monitoring and evaluation capacities for risk analysis and risk reduction. Corruption and Lack of apathy also remain a major gap. International organisations can work on policymaking, contingency plans, and construction mechanisms after a disaster in partnership with NDMA.

The content analysis highlights various aspects of NDMA's strengths and areas for improvement in its partnership with international organisations and NGOs, as reported by the respondents.

Respondent 2 emphasises NDMA's strength in responding to disasters, showcasing its experience and effectiveness in managing crises. However, it suggests that there is room for

improvement in disaster preparedness efforts, indicating a need for proactive measures to mitigate and prepare for disasters before they occur. Respondent 3 points out the need for NDMA to improve its engagement with organisations by allowing them to fill gap areas in disaster management. It highlights the strength of NDMA in terms of its wide outreach, indicating its ability to connect with a broad range of stakeholders.

Respondent 4 identifies NDMA's strengths in its wide outreach and linkages with the armed forces, enabling it to provide first responders during emergencies. The presence of protocols and coordination mechanisms for emergency response is also acknowledged. However, it acknowledges that NDMA requires additional capacity and resource support, suggesting areas for improvement in enhancing its capabilities. Respondent 5 highlights various challenges and gaps in the partnership between NDMA and international organisations/NGOs. These include a lack of political will, a shortage of trained construction workforce, inadequate monitoring and evaluation capacities for risk analysis and reduction, corruption, and lack of apathy. It suggests that international organisations can contribute by working on policymaking, contingency plans, and construction mechanisms in partnership with NDMA.

Overall, the analysis reveals both strengths and areas for improvement in NDMA's partnership with international organisations and NGOs. While NDMA demonstrates strength in responding to disasters and maintaining outreach, there is a need to enhance disaster preparedness efforts, improve engagement with organisations, and address challenges such as capacity-building, corruption, and lack of political will. Collaborative efforts between NDMA and international organisations/NGOs can contribute to addressing these gaps and strengthening disaster management efforts in Pakistan.

11.1 Limited Media Communication in Regular Days.

The interview findings from respondent number 6, suggest that NDMA's communication with the media is primarily focused on emergencies, with limited communication during regular days. It implies a lack of consistent engagement with the media during non-emergency periods. How effectively does the NDMA communicate with the media during disaster events and emergencies? The respondent commented that there is regular communication during emergencies, however, limited media communication on regular days.

The content analysis reveals that according to respondent 6, NDMA's communication with the media is primarily focused on emergencies, indicating that there is a lack of consistent engagement during non-emergency periods. The respondent suggests that while there is

regular communication with the media during disaster events and emergencies, there is limited communication on regular days.

This finding raises questions about the effectiveness of NDMA's communication strategy with the media. The limited communication during regular days may hinder the dissemination of important information, updates, and awareness campaigns related to disaster management and preparedness. The NDMA must regularly establish and maintain efficient communication channels with the media to offer a consistent flow of information and involve the public in efforts to lower the risk of disasters.

To enhance its involvement with the media, the NDMA may consider developing a comprehensive communication strategy that includes regular updates, press releases, media briefings, and proactive engagement during non-emergency times. By doing this, the NDMA can strengthen its relationship with the media and guarantee accurate and timely information sharing, which is crucial for successful disaster management and increasing public awareness.

11.2 Effectiveness of Communication.

The research finding from respondent 6 indicates that while NDMA generally shares the same information with the public and media, the level of transparency may vary in sensitive cases. It also implies that the timeliness of communication is generally satisfactory, but there may be room for improvement. The respondent added that there is regular communication during emergencies, however, very limited media communication on regular days. The interview findings from respondent number 7 suggest that NDMA communicates effectively with the media during disaster events and emergencies, providing a clear picture in most cases. This implies a proactive approach to sharing information and updates with the media. The respondent replied that NDMA provides a clear picture in most cases.

The analysis of the content reveals that according to respondent number 6, NDMA generally shares the same information with the public and media, but the level of transparency may vary in sensitive cases. It suggests that while NDMA communicates effectively during disaster events and emergencies, there may be limited communication with the media on regular days.

On the other hand, the findings from respondent number 7 indicate that NDMA communicates effectively with the media during disaster events and emergencies, providing a clear picture in most cases. This implies a proactive approach to sharing information and updates with the media.

Overall, the research findings suggest that NDMA's communication with the media is satisfactory during emergencies, with information being shared and a clear picture being presented. However, there may be room for improvement in terms of consistent communication with the media on regular days and maintaining transparency in sensitive cases. The NDMA should think about creating a planned, ongoing communication strategy that covers both emergency and non-emergency situations to improve its interaction with the media. This would guarantee accurate and regular information transmission, encourage openness, and increase public and media trust. Regular press releases, media briefings, and aggressive media interaction can all aid in ensuring that accurate and current information effectively reaches the public.

11.3 Timeliness of communication, Transparency, and Availability of Information.

The level of transparency in NDMA's communication is uncertain based on the research findings. It implies that there may be some concerns regarding the transparency of information shared with the media and the public during disasters. Additionally, the availability of NDMA representatives for media interviews and inquiries during disaster events is described as a challenging task that is done on a need basis. The timeliness is good but not sure about transparency. The text indicates that NDMA's communication during emergencies is timely. It suggests that efforts are made to provide information promptly to the media and the public in crises. Respondent 6 revealed that it is done on a need basis. The timeliness is good but not sure about transparency.

The research finding from respondent 7 indicates that while NDMA generally shares the same information with the public and media, the transparency level may vary in sensitive cases. It also implies that the timeliness of communication is generally satisfactory, but there may be room for improvement. The respondent replied the information shared with the public and media is the same generally, but the transparency differs in some sensitive cases.

The analysis of the content suggests that there are mixed perceptions regarding the level of transparency in NDMA's communication. While the timeliness of communication during emergencies is generally considered satisfactory, there may be concerns about transparency, especially in sensitive cases. It indicates a need for further improvement in ensuring consistent and transparent communication with the media and the public.

To address the concerns raised, NDMA could focus on enhancing transparency by providing clear and accurate information during sensitive situations. It is attained through proactive engagement with the media, regular updates, and clear messaging to address any potential

gaps in transparency. Establishing clear communication protocols and guidelines for different scenarios can help ensure a consistent and transparent approach.

Furthermore, NDMA could consider establishing a dedicated media relations team or spokesperson who can effectively handle media inquiries and interviews during disasters. It would help streamline the process and ensure the availability of NDMA representatives for media interactions. Generally, by prioritising transparency and timely communication, NDMA can enhance its credibility, build public trust, and effectively disseminate important information during emergencies and non-emergency periods.

Theme 12. Collaboration with Media Outlets.

The research outcome from respondent 6 mentions that NDMA collaborates with media outlets by organising press conferences, and briefings, and issuing press releases (PRs). They also disseminate information through social media posts. It suggests that NDMA utilises various channels to work with media organisations and disseminate accurate and timely information during disasters. Respondent replied that they are available during press conferences/briefings. The PRO responds from time to time. The research finding from respondent 7 mentions that NDMA collaborates with media outlets and is cooperative in terms of sharing accurate and timely information during disaster situations. It suggests a willingness to work together and ensure the dissemination of reliable information. The respondent replied that NDMA is cooperative in terms of information sharing.

The content analysis indicates that NDMA actively collaborates with media outlets and employs various channels to disseminate accurate and timely information during disasters. To interact with the media, the organisation hosts press conferences, and briefings, and produces news releases. In addition, the NDMA uses social media sites to inform the public of updates. The respondent from research finding 6, highlights the availability of NDMA during press conferences and briefings, indicating a proactive approach to media engagement. The Public Relations Officer (PRO) also responds to media inquiries, further demonstrating their cooperation with media organisations.

Similarly, the respondent from research finding 7 emphasises NDMA's willingness to collaborate and share reliable information during disaster situations. It suggests a cooperative approach to working with media outlets and ensuring the dissemination of accurate updates. Overall, the findings indicate that NDMA recognises the importance of effective communication with the media and utilises various channels to share information during disasters. By increasing the efforts to foster collaborative relationships with media

organisations and maintaining transparent and timely communication, NDMA can enhance its ability to provide accurate and reliable information to the media and the public.

12.1 Accessibility for Media Inquiries.

The research finding from respondent 6 indicates that it is difficult to access NDMA representatives to get interviews and inquiries during disaster events. Respondent stated that there may be challenges in accessing the necessary information from NDMA during crucial periods. The respondent replied that it is quite problematic to get representatives for interviews and inquiries. Respondent number 7 stated that media inquiries are mostly ignorant during times of emergency and chaos. It indicates a potential area for improvement in terms of addressing media inquiries and requests for information during disaster response and recovery operations. The respondent replied that media inquiries are mostly ignorant in times of emergency and chaos.

The analysis of the content suggests that both research findings highlight challenges in accessing NDMA representatives for interviews and inquiries during disaster events, indicating a potential area for improvement in NDMA's responsiveness to media inquiries and requests for information.

According to the research finding from respondent 6, it is difficult to get NDMA representatives for interviews and inquiries during crucial periods. The respondent emphasised the challenges in accessing necessary information from NDMA during such times. This suggests a potential gap in communication and responsiveness from NDMA during disaster events.

Similarly, the research finding from respondent 7 indicates that media inquiries are mostly ignorant during times of emergency and chaos. The respondent commented on the lack of attention given to media inquiries in such situations. It shows the availability of margins of improvement in how disaster response and recovery operations handle media enquiries and deliver fast and accurate information.

It shows that there is room for improvement in how disaster response and recovery operations handle media enquiries and deliver fast and accurate information. The significance of good communication and prompt information delivery to the media during disasters is highlighted by these findings. The National Disaster Management Agency (NDMA) can increase transparency, support accurate reporting, and uphold public confidence in its disaster management activities by resolving these issues and enhancing responsiveness to media requests.

12.2 Accuracy and Reliability of Information.

The research finding from respondent number 6 states that NDMA provides PRs and shares information on the website and social media platforms. It implies that steps are taken to ensure the accuracy and reliability of information shared with the media and the public during disaster affairs. The respondent relied that, they provide PRs and also put information on the website and social media.

The research finding from respondent 7 mentions that NDMA is working towards ensuring the accuracy and reliability of information shared with the media and the public during disaster situations. It implies efforts to establish media policies and share timely and correct information. The respondent commented that, like every other department, NDMA is working towards media policymaking and sharing of timely/correct information.

The content analysis suggests that NDMA takes measures to ensure the accuracy and reliability of information shared with the media and the public during disaster situations.

According to the research finding from respondent 6, NDMA provides press releases (PRs) to the media, indicating a structured approach to sharing information. The organisation also disseminates information via its website and social media channels. These measures show a dedication to giving the public and the media accurate and trustworthy updates.

Similarly, the research finding from respondent 7 indicates that NDMA is actively working towards ensuring the accuracy and reliability of information shared during disasters. Efforts are being made to establish media policies and share timely and correct information. This suggests a proactive approach to improving communication practices and ensuring that the information shared by NDMA is trustworthy.

The NDMA exhibits its dedication to disseminating accurate and trustworthy information during emergencies by developing media policies, routinely updating material on its website and social media channels, and publishing press releases. By fostering trust and confidence, these initiatives may help the public and the media make wise decisions in times of crisis.

12.3 Addressing Misinformation.

The research finding from respondent number 6 does not mention specific mechanisms in place for NDMA to address and correct misinformation or rumours that may circulate during disasters. It suggests a potential area for improvement in the NDMA's communication strategies. The respondent stated that she has not seen this so far.

The research finding from respondent 7 indicates that mechanisms are in place for NDMA to

identify incorrect news or rumours and take steps to address and correct them. It highlights the importance of countering misinformation during disasters. Respondent replied that yes, NDMA identifies incorrect news/facts and rectifies them.

The content analysis suggests a discrepancy in the research findings regarding the mechanisms in place for NDMA to address and correct misinformation or rumours during disasters. According to the research finding from respondent 6, there is no specific mention of mechanisms on the spot for NDMA to address and correct misinformation or rumours that may circulate during disasters. It suggests a potential area for improvement in the NDMA's communication strategies. The respondent indicated that she has not seen such mechanisms implemented by NDMA.

On the other hand, the research finding from respondent 7 suggests that mechanisms are indeed in place for NDMA to identify incorrect news or rumours and take steps to address and correct them. It indicates that NDMA recognises the importance of countering misinformation during disasters. The respondent confirmed that NDMA identifies incorrect news or facts and takes measures to rectify them.

Given this discrepancy, the presence and effectiveness of mechanisms for addressing misinformation may vary within NDMA's communication practices. NDMA needs to have robust strategies in place to promptly identify and correct any misinformation or rumours that may arise during disasters. This ensures that accurate and reliable information reaches the public, mitigating potential confusion and facilitating informed decision-making.

Theme 13. Media Engagement for Awareness.

The research finding from respondent 6 suggests that NDMA engages with media organizations through press conferences, PRs, and calls to raise awareness about disaster preparedness, risk reduction, and resilience-building initiatives. This indicates efforts to involve the media in promoting disaster-related awareness among the public. Interviewee 6 responded that the NDMA gets engaged through press conferences, PRs, and Calls.

The research finding from respondent number 7 states that NDMA has conducted workshops and awareness-building sessions with various industries, including the media, to raise awareness about disaster preparedness, risk reduction, and resilience-building initiatives. It suggests proactive engagement to promote understanding and collaboration in disaster management efforts. Respondent 7 commented that NDMA has conducted numerous workshops and awareness-building sessions with almost all industries including media.

The analysis of the content suggests that both research findings highlight NDMA's engagement with media organisations to raise awareness about disaster preparedness, risk reduction, and resilience-building initiatives.

According to the research finding from respondent 6, NDMA engages with media organisations through press conferences, press releases (PRs), and calls. This indicates an active effort to involve the media in promoting awareness about disaster-related topics. The respondent confirmed this engagement.

Similarly, the research finding from respondent 7 suggests that NDMA has conducted workshops and awareness-building sessions with various industries, including the media. This proactive engagement indicates a comprehensive approach to raising awareness and promoting collaboration in disaster management efforts. The respondent affirmed that NDMA has conducted numerous workshops and awareness-building sessions involving media organisations.

These findings indicate that NDMA recognizes the importance of media engagement in disseminating information and raising public awareness about disaster preparedness, risk reduction, and resilience-building. By working closely with media organisations, NDMA can effectively communicate its initiatives and messages to a broader audience, ultimately contributing to enhancing disaster resilience within the community.

13.1 Media Perceptions of NDMA's Relevance, Efficiency and Effectiveness.

The research finding from respondent 6 indicates that there is limited knowledge and trust in the NDMA's work among the media. It implies that there might be a need to improve the perception of NDMA's transparency, responsiveness, and overall performance in disaster management efforts. The respondent commented that there is not much knowledge nor trust in NDMA's work.

The research finding from respondent 7 suggests that the media expects NDMA's information cells to become swifter and more vigilant. This indicates a desire for improved responsiveness and transparency in NDMA's communication during disaster management efforts. The respondent replied that the media expects NDMA's information cell to become swifter and more vigilant.

The analysis of the content suggests that there is a need to improve the perception of NDMA's work and enhance the level of trust and knowledge among the media regarding NDMA's disaster management efforts.

According to the research finding from respondent 6, there is limited knowledge and trust in the NDMA's work among the media. This suggests that there might be a lack of knowledge and comprehension of the NDMA's operations, which could result in scepticism or reservations regarding its openness, responsiveness, and overall performance in disaster management. To remedy this, the NDMA may strengthen its interactions with the media, divulge more details about its operations and accomplishments, and foster trust by upholding accountability and openness in its activities and communications.

Similarly, the research finding from respondent 7 suggests that the media expects NDMA's information cell to be swifter and more vigilant. This indicates a desire for improved responsiveness and transparency in NDMA's communication during disaster management efforts. NDMA can address this expectation by establishing effective communication channels, promptly responding to media inquiries, and providing timely and accurate information. This will foster trust and improve how the media perceives the NDMA's performance.

The NDMA can aim to forge a deeper relationship with the media, increase their familiarity with and faith in its work, and ultimately generate better understanding and support for its disaster management efforts by taking steps to improve communication, transparency, and responsiveness.

13.2 Recommendations for Improvement.

The research finding from respondent 6 recommends that NDMA should communicate regularly to enhance their media engagement and communication strategies during disasters. This suggests a need for more consistent and proactive communication efforts. The respondent stated that they need to communicate regularly.

The research finding from respondent 7 recommends that NDMA establish a dedicated information cell committee that directly communicates with the media and provides timely and correct information. This implies a need for a more structured and efficient communication strategy during disasters. The respondent replied and suggested that NDMA should establish a dedicated information cell committee that directly communicates with media and provides timely and correct information.

The analysis of the content specifies that both research findings emphasize the need for improvements in NDMA's media engagement and communication strategies during disasters.

According to the research findings from respondent 6, it is suggested that NDMA should

communicate regularly to enhance its media engagement and communication efforts during disasters. The respondent highlighted the significance of consistent and proactive communication to ensure effective engagement with the media. This suggests that the NDMA should establish a more regular and structured approach to communicating with the media during disaster events.

Similarly, the research finding from respondent 7 endorses the establishment of a dedicated information cell committee within NDMA that directly communicates with the media and provides timely and accurate information. This implies the need for a more structured and efficient communication strategy during disasters, with a specific focus on engaging with the media. By establishing a dedicated committee, NDMA can ensure better coordination, timely responses to media inquiries, and the provision of correct information.

These recommendations highlight the significance of consistent and pre-emptive communication, as well as the instituting of dedicated mechanisms within NDMA to facilitate effective media engagement during disasters. By instigating these suggestions, NDMA can improve transparency, build trust with the media, and enhance public awareness and understanding of their disaster management efforts.

Theme 14. Strengths and Weaknesses in NDMA's Disaster Management Strategies and Policies.

The findings from respondent 8 research perspective highlight key areas of strength, including preparedness and planning, risk assessment and monitoring, international collaboration, and community engagement. On the other hand, weaknesses are identified in implementation challenges, communication, and information sharing, inadequate integration of climate change, limited focus on vulnerable groups, and long-term recovery and resilience efforts.

The analysis of the findings from Respondent 8's research perspective reveals several areas of strength and weaknesses in the NDMA's disaster management efforts.

a. Strengths:

1. **Preparedness and planning:** The NDMA demonstrates strength in preparedness and planning, indicating that they have effective strategies and measures in place to anticipate and respond to disasters.
2. **Risk assessment and monitoring:** NDMA shows competence in conducting risk assessments and monitoring, which are essential for identifying potential hazards and vulnerabilities.

3. International collaboration: The NDMA is recognized for its collaboration with international partners, indicating a proactive approach to working together on disaster management initiatives.
4. Community engagement: The research findings suggest that NDMA engages with communities, which is crucial for building resilience at the grassroots level and ensuring effective disaster response.

b. Weaknesses:

1. Implementation challenges: The research identifies challenges in implementing disaster management initiatives, suggesting that there may be obstacles or issues hindering the effective execution of plans and strategies.
2. Communication and information sharing: Weaknesses in communication and information sharing are highlighted, indicating potential gaps in effectively disseminating crucial information to stakeholders, including the public and media.
3. Inadequate integration of climate change: The findings suggest that NDMA's integration of climate change considerations into disaster management may be insufficient, which is important for addressing the increasing risks associated with climate-related disasters.
4. Limited focus on vulnerable groups: The research indicates that NDMA may need to improve its focus on vulnerable groups, ensuring that their specific needs and vulnerabilities are adequately addressed in disaster management efforts.
5. Long-term recovery and resilience efforts: Weaknesses are identified in long-term recovery and resilience efforts, suggesting the need for improved strategies and measures to support communities in rebuilding and enhancing their resilience after disasters.

Overall, the analysis reveals both strengths and weaknesses in the NDMA's disaster management approach. By building upon their strengths and addressing the identified weaknesses, NDMA can further enhance their effectiveness in disaster preparedness, response, and recovery, ultimately contributing to more resilient communities and reducing the impacts of disasters in Pakistan.

Theme 15. Incorporation of Scientific Research and Evidence-based Approaches.

According to respondent number 8, the theme unfolds the effectiveness of NDMA in incorporating scientific research and evidence-based approaches into its disaster management

practices can be enhanced through collaborations between researchers and practitioners, knowledge exchange mechanisms, interdisciplinary approaches, and ongoing training and capacity building. The importance of evidence-based decision-making and research addressing specific regional needs is emphasized. The respondent commented that to enhance the effectiveness of research integration, disaster management authorities should foster strong collaborations between researchers and practitioners, establish mechanisms for knowledge exchange, promote interdisciplinary approaches, and invest in ongoing training and capacity building for staff members. Additionally, promoting a culture of evidence-based decision-making and investing in research that addresses the specific needs and challenges of disaster-prone regions can further strengthen the integration of scientific research into disaster management practices.

The analysis of the findings from respondent 8 highlights key recommendations to enhance the effectiveness of NDMA in incorporating scientific research and evidence-based approaches into its disaster management practices. These recommendations include.

1. Collaboration between researchers and practitioners: Building strong partnerships and collaborations between researchers and practitioners can facilitate the integration of scientific research into disaster management. This cooperation can guarantee that study results are pertinent, useful, and directly applicable to actual situations.
2. Establishing information exchange channels, such as forums, conferences, and workshops, can encourage the sharing of research results, best practices, and lessons learned between researchers and practitioners. This facilitates the adoption of evidence-based approaches in disaster management.
3. Interdisciplinary approaches: Encouraging interdisciplinary approaches that bring together experts from various fields can enhance the understanding and response to complex disaster challenges. Integrating knowledge and expertise from multiple disciplines can lead to more comprehensive and effective disaster management strategies.
4. Ongoing training and capacity building: Investing in training and capacity-building programs for NDMA staff members can ensure that they have the necessary skills and knowledge to understand and utilize scientific research in their decision-making processes. Continuous learning and professional development opportunities can strengthen the integration of research into practice.

5. Addressing specific regional needs: Recognizing the importance of context-specific research, the respondent emphasizes the need for research that addresses the specific needs and challenges of disaster-prone regions. This tailored research can provide insights and solutions that are applicable and effective in the local context.

By implementing these recommendations, NDMA can enhance its capacity to incorporate scientific research and evidence-based approaches into its disaster management practices. This

will enable more informed decision-making, improved response strategies, and ultimately, more effective disaster management outcomes.

15.1 Collaboration between NDMA and Academic Institutions.

This subtheme talks about the gaps and areas of improvement in the collaboration between NDMA and academic institutions identified, including limited engagement, research priorities, data sharing and access, and capacity building and training. Strengthening collaboration and addressing these gaps can enhance disaster management efforts. The respondent commented and pointed out the gaps as, limited engagement, research priorities, data sharing and access, capacity building, and training.

The analysis of the findings from respondent 8 highlights important gaps and areas of improvement in the collaboration between NDMA and academic institutions. These gaps include.

1. Limited engagement: The level of engagement between NDMA and academic institutions may be limited, indicating a need for stronger and more frequent collaborations. Enhanced engagement can foster knowledge exchange, research partnerships, and joint initiatives that contribute to effective disaster management.
2. Research priorities: The respondent identifies research priorities as an area of improvement. It implies that there might be a need to match academic institutions' research agendas with the requirements and priorities of NDMA. This coordination makes sure that research efforts are concentrated on tackling particular problems and offering workable answers for disaster management.
3. Data sharing and access: The sharing and access to data between NDMA and academic institutions may present a gap. Efficient data sharing and access mechanisms are crucial for informed decision-making and evidence-based practices. Collaboration and research outcomes can be improved by building systems to make it

easier to access pertinent data and strengthening data-sharing standards.

4. Capacity building and training: This sector needs improvement due to the requirement for capacity building and training. Building the capacity of both NDMA and academic institution personnel through training programs, workshops, and collaborative learning opportunities can enhance their skills and knowledge in disaster management. This capacity building ensures that both parties are equipped with the necessary expertise to contribute effectively to disaster management efforts.

By addressing these gaps and areas of improvement, NDMA and academic institutions can strengthen their collaboration and partnership. This will lead to enhanced research, improved data-driven decision-making, and ultimately, more effective disaster management efforts.

15.2 Evaluation of NDMA's Disaster Management Initiatives.

The subtheme reveals that the specific research studies or assessments conducted to evaluate the effectiveness and impact of NDMA's disaster management initiatives are not mentioned in the interview. The respondent commented that she had no idea about it.

The analysis of the findings from respondent 8 suggests that specific research studies or assessments evaluating the effectiveness and impact of NDMA's disaster management initiatives were not mentioned during the interview. It indicates a potential gap in the available information regarding the evaluation of NDMA's initiatives. The respondent mentioned not knowing specific research studies or assessments conducted in this regard.

To gain a comprehensive understanding of the effectiveness and impact of NDMA's disaster management initiatives, further research or access to additional information may be necessary. This could involve conducting specific evaluations or seeking out existing studies or assessments conducted by academic institutions, research organizations, or independent evaluators. Evaluating the effectiveness and impact of disaster management initiatives is crucial for continuous improvement and informed decision-making in disaster management practices.

15.3 Recommendations and Best Practices.

The subtheme that emerged as a result of research suggests some academic recommendations to enhance NDMA's disaster management efforts, such as establishing a dedicated research and collaboration unit, fostering collaboration with academic institutions, and promoting interdisciplinary research.

The analysis of the findings from respondent 8 highlights several academic recommendations

to enhance NDMA's disaster management efforts. These recommendations include:

5. Establishing a specialised unit within NDMA with an emphasis on research and collaboration will make it easier to incorporate academic know-how and improve the application of evidence-based techniques in disaster management. This unit can act as a hub for interacting with educational institutions, managing research initiatives, and encouraging cooperation between academics and practitioners.
6. Strengthening connections and collaborations with academic institutions: These relationships can give you access to a wide range of resources and knowledge. Examples of collaboration efforts are such as joint research initiatives, exchanges of knowledge, training schemes and inclusion of academic experts in the creation of policy and decision-making processes.
7. Given the complexity of catastrophe management, it is crucial to promote multidisciplinary research since interdisciplinary concerns frequently arise from complex problems that need to be solved. For a precise understanding of disasters and their effects, multidisciplinary studies must be encouraged. This will enable the creation of thorough and efficient disaster management plans. This may call for cooperation amongst a variety of academic fields, including the social sciences, engineering, environmental studies, public health, and urban planning.

By putting these academic suggestions into practice, NDMA can improve its disaster management efforts by making use of the experience and information found at academic institutions. Informed by thorough research and interdisciplinary viewpoints, this can result in enhanced policies, practices, and decision-making procedures.

Theme 16. Engagement with Academia and Leveraging Expertise.

This theme reveals that respondent 8 does not provide specific information on how NDMA engages with academia to leverage its expertise in disaster risk reduction, resilience building, and disaster management training and education. The respondent said that she had no idea about it.

Based on the analysis, it seems that respondent 8 does not have precise information regarding how NDMA engages with academia to impact its expertise in disaster risk reduction, resilience building, and disaster management training and education. The respondent's dearth of knowledge proposes a potential gap in understanding the particular mechanisms and initiatives undertaken by NDMA in collaboration with academia.

To gain a comprehensive understanding of NDMA's engagement with academia, it may be necessary to consult additional sources or experts who can provide insights into the specific initiatives, partnerships, and collaborations between NDMA and academic institutions. This would help shed light on the extent to which NDMA leverages academic expertise in disaster management efforts and the impact of such collaborations on enhancing disaster risk reduction, resilience building, and training and education programs.

16.1 Collaborative Research Projects.

The subtheme that emerged out of the research finding acknowledges the potential for collaborative research projects between academia and NDMA to address specific challenges or knowledge gaps in disaster management. Respondent 8 replied that she is not sure exactly but there must be some opportunities.

Based on the analysis, it is acknowledged that there is potential for collaborative research projects between academia and NDMA to address specific challenges or knowledge gaps in disaster management. While respondent 8 is not certain about the specific opportunities, their response suggests a recognition of the potential benefits of such collaborations.

The acknowledgement of the potential for collaborative research projects indicates an understanding of the value that academia can bring in generating new knowledge, conducting research studies, and offering expertise in disaster management. By leveraging the resources, skills, and knowledge of academic institutions, NDMA can potentially enhance its disaster management practices, improve resilience, and address specific challenges more effectively.

To explore and capitalize on these opportunities, it may be beneficial for NDMA to actively engage with academia, establish mechanisms for collaboration, and identify specific research areas or projects of mutual interest. This could involve fostering partnerships, developing joint research proposals, and promoting knowledge exchange between NDMA and academic institutions. Such collaborations can contribute to evidence-based decision-making, capacity building, and innovation in disaster management efforts.

16.2 Capacity Building and Technical Expertise.

The subtheme that emerged out of the research reveals that, according to respondent 8 academia can support NDMA in developing and implementing capacity-building programs for disaster management at various levels by introducing relevant courses. The respondent suggested introducing relevant courses.

The analysis indicates that respondent 8 recognizes the potential role of academia in supporting NDMA's capacity-building efforts in disaster management. The respondent suggests that

academia can contribute by introducing relevant courses to enhance the skills and knowledge of professionals and stakeholders involved in disaster management.

Academic institutions can offer specialised training and education that is in line with the needs of the NDMA and other stakeholders by establishing courses that are especially created to address the needs and problems of disaster management. Various areas of disaster management, such as risk assessment, emergency response, resilience-building, and policy creation, may be covered in these courses. The introduction of relevant courses by academia can help in building a skilled workforce equipped with the necessary knowledge and expertise to effectively respond to and manage disasters. It can also contribute to the professional development of individuals working in disaster management and support the overall capacity-building efforts of NDMA.

To facilitate this collaboration, NDMA can engage with academic institutions to identify the specific areas of capacity-building needs and work together to design and implement courses that address these needs. This partnership can ensure that the courses provided by academia align with the practical requirements of disaster management and contribute to enhancing the overall disaster management capacity in the country.

Theme 17. Role of Academia in Disaster Response and Recovery.

The theme emerged out of the research unfolds that academia can provide technical expertise and guidance to NDMA during disaster response and recovery operations, particularly in creating awareness and education. The respondent replied that by creating awareness.

The analysis suggests that academia can play a valuable role in providing technical expertise and guidance to NDMA during various phases of disaster management, particularly in creating awareness and education.

By leveraging their knowledge and expertise, academic institutions can contribute to raising awareness among the public about disaster risks, preparedness measures, and response strategies. They can develop educational materials, conduct research studies, and collaborate with NDMA in designing and implementing awareness campaigns.

Academia can also support NDMA in developing training programs and capacity-building initiatives aimed at enhancing the skills and knowledge of disaster management professionals,

government officials, and other stakeholders. They can help by delivering specialized training modules, leading seminars, and exchanging best practices supported by data and proof. Academic institutions can also carry out research projects to produce fresh perceptions and information in the field of catastrophe management. They can work with NDMA to undertake impact analyses, analyse the efficiency of disaster response plans, and pinpoint development opportunities.

Overall, the involvement of academia in disaster response and recovery operations can bring technical expertise, research-based insights, and educational resources to enhance NDMA's efforts. By creating awareness and education, academia can contribute to building a more informed and resilient society in the face of disasters.

17.1 Academic Studies on Impacts of Disasters.

The subtheme that emerged out of the research confirms that there are academic studies and insights available that shed light on the social, economic, or environmental impacts of disasters in Pakistan and their implications for NDMA's disaster management approach. The respondent replied yes there is literature available.

The analysis suggests that there is existing academic literature and studies available that provide insights into the social, economic, and environmental impacts of disasters in Pakistan. These studies contribute to understanding the specific challenges and implications for NDMA's disaster management approach in the country.

The NDMA can benefit from these current research results to provide valuable insight into the patterns, trends and consequences of disasters in Pakistan. This knowledge may contribute to the development of an effective disaster management plan, policy and intervention that is suited to national circumstances and needs. The evidence base of recommendations to improve disaster preparedness, response and recovery efforts may be provided by academics' studies. They may address areas of need for more attention and detect gaps in the current approach. By considering the findings and recommendations of academic research, NDMA can enhance its decision-making processes and strengthen its disaster management practices.

Furthermore, the availability of academic literature allows for knowledge exchange and collaboration between academia and NDMA. Researchers and practitioners can engage in dialogue and share their expertise to collectively work towards more effective and sustainable disaster management solutions.

Overall, the existence of academic studies and insights provides a valuable resource for NDMA to enhance its understanding of the impacts of disasters in Pakistan and improve its disaster management approach. By leveraging this existing knowledge, NDMA can strengthen its strategies, policies, and practices to better address the challenges posed by disasters in the country.

17.2 Academia and Emerging Challenges.

The subtheme that emerged out of the research reveals that academia can contribute to enhancing NDMA's preparedness for emerging challenges, such as climate change-induced disasters, through relevant courses, education, and research. The respondent suggested that introducing relevant courses educates the youth and students at large.

According to the findings, academics have a big role to play in helping NDMA get ready for new challenges, especially those related to climate change-related disasters. The academic community may play a significant role in providing the youth and students with the knowledge and abilities required to comprehend and confront the implications of climate change on catastrophe risk by offering pertinent courses, education, and research.

Students' comprehension can be boosted by offering classes that concentrate on catastrophe risk reduction, resilience, and climate change. These courses can give students the information they need to understand the intricate relationships between climate change and disasters, as well as the tactics and methods for minimising and adjusting to these difficulties.

Academic institutions can do research in addition to offering courses. Academic institutions may also conduct research projects that advance knowledge of climate change-related disasters and their consequences for disaster management in addition to offering academic courses. Research studies can explore the specific vulnerabilities, risks, and adaptation strategies relevant to the local context in Pakistan. This research can provide valuable insights and evidence to inform NDMA's decision-making processes and enhance its preparedness efforts.

Moreover, academia can foster collaboration and partnerships with NDMA in designing and implementing capacity-building programs. By working together, academia and NDMA can develop training modules, workshops, and educational initiatives that target professionals, practitioners, and decision-makers involved in disaster management. These capacity-building programs can enhance the skills, knowledge, and preparedness of individuals and institutions involved in disaster risk reduction.

Overall, the involvement of academia through relevant courses, education, and research can contribute to NDMA's preparedness for climate change-induced disasters. It can strengthen the understanding, awareness, and capacity of individuals and institutions involved in disaster management, leading to more effective and sustainable approaches to address emerging challenges.

18. The Relevance, Effectiveness, and Efficiency of NDMA.

Relevance of NDMA.

The National Disaster Management Authority (NDMA) holds intrinsic relevance within its framework, embodying its mandate and purpose to mitigate, respond to, and recover from disasters in Pakistan. NDMA's role as the apex body for disaster management underscores its significance in formulating policies, strategies, and guidelines that guide the nation's disaster risk reduction efforts. By continuously assessing the evolving landscape of hazards and vulnerabilities, NDMA maintains its relevance by adapting its approaches to address emerging threats, whether natural or man-made. The authority's effective coordination with various governmental agencies, local authorities, and stakeholders underscores its pivotal role in orchestrating a comprehensive disaster response. Moreover, NDMA's role in fostering partnerships with academia, international organizations, and civil society organizations underscores its commitment to embracing diverse perspectives and expertise in its decision-making processes. By keeping itself aligned with global standards and integrating cutting-edge technologies, NDMA reinforces its relevance as a dynamic and responsive institution. Ultimately, NDMA's ability to continuously enhance its capacities and strategies amplifies its relevance in fulfilling its mandate to safeguard lives, infrastructure, and livelihoods in the face of a diverse and evolving range of challenges.

According to respondents related to International Organizations, The National Disaster Management Authority (NDMA) of Pakistan holds considerable relevance from the perspective of international organizations engaged in disaster risk reduction and humanitarian assistance. They said that NDMA's role as a central institution for disaster management is of interest to international organizations due to Pakistan's vulnerability to a wide array of hazards, including natural disasters, public health emergencies, and climate change-related challenges. International organizations collaborate with NDMA to align strategies, share best practices, and support capacity-building initiatives that enhance the country's disaster resilience. The authority's engagement with global frameworks such as the Sendai Framework for Disaster Risk Reduction serves as a conduit for international organizations to assess NDMA's

adherence to evolving global standards. The effective functioning of NDMA is vital for international organizations' efforts to coordinate disaster response, allocate resources efficiently, and provide technical expertise during crises. By supporting NDMA's endeavours and offering technical assistance, international organizations contribute to strengthening disaster management capabilities within Pakistan, making the authority's relevance crucial in facilitating effective cross-border collaboration and promoting a more resilient future.

Within the realm of Pakistani academia, the respondents from academia stated that the National Disaster Management Authority (NDMA) holds profound relevance as an object of study, analysis, and collaboration. Scholars and researchers engage with NDMA's policies, strategies, and actions to critically evaluate its effectiveness in mitigating the diverse range of hazards that Pakistan is prone to. By examining NDMA's approaches to disaster preparedness, response, and recovery, academia contributes to a deeper understanding of the authority's strengths, weaknesses, and potential areas for improvement. Through research endeavours, academia assesses NDMA's alignment with evolving global standards for disaster risk reduction, offering insights into the authority's adaptability to emerging threats and changing environmental conditions. Collaborative initiatives between NDMA and academia foster a synergy of knowledge and practical expertise, enhancing the country's overall disaster resilience. The academic community's scrutiny and scholarly engagement with NDMA's operations ensure a continuous dialogue aimed at optimizing disaster management strategies, making its relevance paramount in shaping the discourse on disaster preparedness and response within Pakistan.

According to the respondents from the media, the National Disaster Management Authority (NDMA) holds significant relevance within the context of Pakistan, a country frequently confronted with diverse and complex disaster challenges. The Pakistani media plays a crucial role in highlighting NDMA's relevance by providing insights into its multifaceted roles, policies, and actions. Through extensive coverage of natural disasters, technological hazards, and public health emergencies, the media sheds light on NDMA's pivotal role in disaster preparedness, response, and recovery. By scrutinizing NDMA's effectiveness in addressing various crises, the media not only raises awareness among the public but also holds the authority accountable for its endeavours. This media scrutiny fosters a discourse that assesses NDMA's alignment with evolving global standards and its responsiveness to emerging threats. The media's role in amplifying NDMA's efforts and critiquing its shortcomings ensures a more comprehensive understanding of disaster management's significance and stimulates discussions on how NDMA can better adapt to the evolving disaster landscape. Consequently,

the media's attention underscores NDMA's relevance as a central institution tasked with safeguarding Pakistan's population and infrastructure in the face of an increasingly complex array of challenges.

Effectiveness of NDMA.

The effectiveness of the National Disaster Management Authority (NDMA) as an institution is a pivotal factor that shapes its ability to fulfil its mandate of disaster preparedness, response, and recovery within Pakistan. NDMA's effectiveness is evaluated through its internal mechanisms, coordination efforts, and the outcomes of its disaster management initiatives. The respondents said that the authority's ability to establish clear communication channels, efficient decision-making processes, and well-defined roles within its organizational structure contributes to its overall effectiveness. NDMA's effectiveness is also gauged by its capability to mobilize resources promptly and allocate them strategically during disaster events. Moreover, the consistency with which NDMA's strategies align with evolving global standards and adapt to emerging threats showcases its proactive approach and effectiveness in addressing dynamic challenges. By conducting post-disaster evaluations, analysing successes and failures, and implementing lessons learned, NDMA reflects its commitment to continuous improvement and effectiveness enhancement. Ultimately, the effectiveness of NDMA is a critical factor that determines its capacity to safeguard lives, minimize damage, and promote disaster resilience across the nation.

According to the respondent, the effectiveness of the National Disaster Management Authority (NDMA) of Pakistan in collaboration with international organizations is a subject of critical examination and strategic importance. NDMA's effectiveness is gauged through its capacity to align its disaster management strategies with global standards and best practices, fostering a seamless partnership with international organizations. The authority's ability to integrate international expertise, resources, and technical assistance into its operations is indicative of its effectiveness in harnessing external support for disaster response and risk reduction. The extent to which NDMA successfully coordinates with international organisations during disaster events facilitates timely information sharing and optimises the allocation of resources further highlighting its effectiveness in enhancing the nation's disaster resilience. A robust relationship between NDMA and international organisations indicates the authority's success in leveraging global networks to enhance its operational efficiency and ensure a harmonised response to cross-border disasters. By effectively leveraging international partnerships, NDMA not only strengthens its capabilities but also contributes to the collective global effort

in disaster risk reduction, rendering its effectiveness a critical component of international disaster management endeavours.

The respondent from academia extended that, the effectiveness of the National Disaster Management Authority (NDMA) within the realm of Pakistani academia encompasses a crucial dimension of scholarly engagement and critical evaluation. NDMA's effectiveness is evaluated through its responsiveness to academic research, its ability to incorporate evidence-based insights into policies, and its collaboration with academic institutions. The authority's willingness to engage with academia in research initiatives, workshops, and conferences indicates its commitment to continuous learning and improvement. NDMA's effectiveness is measured by its capacity to integrate academic research findings into its disaster management strategies, enhancing the precision and relevance of its actions. Additionally, NDMA's receptiveness to academic critiques and recommendations demonstrates its adaptability and responsiveness to emerging challenges. Collaborations between NDMA and academia promote a two-way exchange of knowledge, where academics benefit from practical insights, while NDMA gains from theoretical expertise. This synergy enhances NDMA's overall effectiveness by fostering a culture of research-driven innovation and ensuring that its disaster management approaches remain grounded in the latest academic advancements.

According to the respondents from the media, the effectiveness of the National Disaster Management Authority (NDMA) within the context of Pakistani media reflects a multifaceted dynamic that shapes public perception, accountability, and disaster awareness. NDMA's effectiveness is inherently intertwined with its ability to engage with the media in a transparent and informative manner. The authority's success in disseminating accurate and timely information to the public during disaster events contributes to its effectiveness by enabling informed decision-making and reducing panic. Moreover, NDMA's proactive interaction with the media, providing updates on preparedness measures and response efforts, serves as a testament to its commitment to open communication and accountability. The media, in turn, plays a pivotal role in scrutinising NDMA's actions and policies, thus acting as a mechanism for holding the authority accountable for its disaster management endeavours. The effectiveness of NDMA can be measured through its capacity to address media critiques and provide comprehensive explanations of its strategies and actions. A harmonious interaction between NDMA and the media strengthens disaster awareness, fosters public trust, and elevates NDMA's ability to effectively manage disasters while keeping the public informed and engaged.

The efficiency of NDMA.

The efficiency of the National Disaster Management Authority (NDMA) within its operational framework is a fundamental aspect that influences the authority's ability to respond effectively to disaster events. NDMA's efficiency is assessed through the optimization of its resources, streamlined processes, and timely decision-making. The authority's capacity to swiftly mobilise personnel, equipment, and financial resources during emergencies underscores its operational efficiency. Additionally, NDMA's ability to coordinate with various governmental departments, local authorities, and external partners reflects its efficiency in orchestrating a cohesive disaster response. The implementation of standardised procedures, well-defined roles, and effective communication channels within NDMA enhances its overall efficiency. Moreover, NDMA's continuous efforts to enhance its capacity-building initiatives, training programs, and knowledge dissemination contribute to its sustained efficiency over time. By prioritising operational excellence, NDMA ensures that its resources are utilised optimally, reducing response times and minimising the impact of disasters on the population and infrastructure.

The respondents from international organisations said that, the efficiency of the National Disaster Management Authority (NDMA) in collaboration with international organisations underscores its ability to leverage external expertise, resources, and partnerships to enhance disaster management capabilities. NDMA's efficiency in engaging with international organisations is measured through its capacity to facilitate seamless communication, coordinate joint initiatives, and effectively utilise shared resources. The authority's ability to align its strategies with international best practices and standards reflects its commitment to operational efficiency. Moreover, NDMA's ability to integrate international assistance into its disaster response and recovery efforts contributes to its efficiency in optimising resource allocation and addressing complex challenges. By effectively partnering with international organisations, NDMA enhances its ability to respond swiftly, allocate resources judiciously, and maximise the impact of its disaster management initiatives. A high degree of efficiency in NDMA's collaboration with international organisations not only strengthens Pakistan's disaster resilience but also showcases the authority's capability to work in tandem with global partners to address multifaceted disaster scenarios effectively.

According to the respondents from academia, the efficiency of the National Disaster Management Authority (NDMA) in collaboration with Pakistani academia underscores its capacity to bridge theoretical insights with practical applications in the realm of disaster

management. NDMA's efficiency in engaging with academia is gauged through its ability to leverage academic research, expertise, and innovative ideas to enhance its operational strategies. The authority's openness to incorporating evidence-based insights from academia ensures a rigorous and informed approach to disaster preparedness, response, and recovery. Moreover, NDMA's efficiency is reflected in its collaborations with academic institutions for joint research initiatives, training programs, and capacity-building efforts. By fostering a two-way exchange of knowledge, NDMA not only benefits from academia's theoretical expertise but also contributes to academia's understanding of on-ground challenges and operational nuances. The authority's ability to seamlessly integrate academic perspectives enhances its overall efficiency in adopting advanced methodologies, staying updated on emerging trends, and refining its disaster management approaches. Ultimately, the synergy between NDMA and Pakistani academia serves as a testament to NDMA's efficiency in incorporating scholarly insights for pragmatic and effective disaster management outcomes.

The media respondent said that the efficiency of the National Disaster Management Authority (NDMA) in its interactions with Pakistani media is indicative of its ability to communicate transparently, disseminate timely information, and manage public perceptions during disaster events. NDMA's efficiency is gauged through its capacity to establish effective communication channels with the media, provide accurate updates, and address concerns promptly. The authority's ability to share comprehensive information about disaster preparedness measures, response efforts, and recovery initiatives reflects its efficiency in maintaining public trust and reducing panic. Furthermore, the proactive approach of NDMA to disseminate educational information on reducing disaster risk through media engagement has contributed to its efficiency in raising public awareness and promoting a culture of resilience. NDMA will ensure the dissemination of accurate and updated information to the public, enabling them to make sound choices and stimulate a sense of safety through effective cooperation with the media. This synergy between NDMA and Pakistani media underscores NDMA's effectiveness in utilising media as a valuable tool for disaster management communication and public engagement, thereby enhancing the overall efficiency of its operations.

CHAPTER 5

CONCLUSION AND RECOMMENDATION

In this chapter, I conclude the study and list policy recommendations for policymakers.

5.1. Conclusion:

This research aimed to undergo the evaluation of the National Disaster Management Authority concerning disaster management. Research gap showed up that the NDMA was not being evaluated along the lines of efficiency, effectiveness, and relevance. The research objectives were designed to get a deep and focused understanding of the topic.

The first objective is to take into consideration, whether the NDMA has been successful in carrying out its mandate or not. The findings tell us that the NDMA Act 2010 and NDMA's mandate is a policy-making platform. NDMA Act established a National Disaster Management Commission, which is chaired by the prime minister of Pakistan. There is a wider bench of leadership where there is a leader of the opposition, both houses, key ministries, chiefs of armed forces, provincial representation, and civil society members into that commission are there. It is the apex body of policy-making in the country. NDMA acts as an implementing body for the decisions. Technically speaking NDMA is not a lead response agency, the response is delegated to the provinces and district authorities who have a presence on the ground level.

This second objective is entertained in this research, which talks about the quality-of-service delivery provided by NDMA. Although there is always a margin for improvement in everything in general, the last disaster was managed excellently. Where we needed it, we engaged the rest of the people and entities. The level of last year's disaster was not an issue to be handled by a single organization or a government organization, but it was dependent on the well-functioning of the overall system was developed on an ad hoc base upon which each department played its role efficiently.

The third objective talks about the significant role of NDMA in managing disasters. The research findings entertain this objective as, according to the NDMA officials, they said that they do emergency response at any cost. Besides that, there is a national disaster risk reduction policy of 2013, according to that our important function is risk reduction Multi-Hazard.

Vulnerability Risk Assessment (MHVRA). It is a global practice and we also believe that

without Risk Knowledge, we do not know how to manage a risk. For example, there is a threat of GLOF in Chitral, and if we don't have a risk knowledge of what sort of risk is prevailing there, we won't be able to do any intervention there. MHVRA is a tool which NDMA applies when we go to the District level, Tehsil Level, and UC Level, we go and identify what sort of risk is there in this area. Then according to that risk, we would take the measures and initiatives. Similarly, in the coastal belt, there is a risk of tsunami, then we will do the tsunami-focused interventions there. Risk knowledge is the basic tool based on which you do your decision-making. Similarly, there was a project named Karachi Transformation Project to look into the monsoon spell, NDMA was determined to open the existing drainage outlets and naalaas, so a marked difference was observed this time, that the level of destruction in Karachi was comparatively lower than it used to be before. A disaster risk reduction measure was taken so that it could withstand the high level of rain. So, it is evident that NDMA has a crucial role in disaster risk reduction.

In conclusion, the research findings shed light on the role and functioning of the National Disaster Management Authority (NDMA) in Pakistan, highlighting its mandate as a policy-making platform and an implementing body for disaster management decisions. The NDMA's coordination with various stakeholders, including provincial and district authorities, the Ministry of Foreign Affairs, the Pakistan Army, the health department, and other agencies, played a crucial role in effectively managing disasters. The collaborative efforts of multiple organizations and stakeholders demonstrated the importance of emergency response and disaster risk reduction in mitigating the impact of disasters. However, financial limitations and a reliance on external funding sources posed challenges for the NDMA in implementing targets and plans, with limited resources affecting the fulfilment of goals outlined in the National Disaster Management Plan. Donor preferences, fluctuating political priorities, and a reactive approach to funding were additional obstacles faced by the NDMA. Furthermore, challenges related to financial resources and technical capacity highlighted the need for enhanced funding and trained human resources to strengthen the NDMA's institutional capacity.

Despite the challenges, the research findings underscored the NDMA's crucial role in disaster risk reduction, emphasizing the significance of risk knowledge and multi-hazard vulnerability risk assessment in decision-making processes. The NDMA's initiatives, such as the Karachi Transformation Project and the focus on risk reduction measures, demonstrated its commitment to managing disasters effectively. However, the need for adequate funding, improved technical

capacity, and sustained commitment from the government were highlighted as areas that require attention to enhance the NDMA's effectiveness in disaster management. By addressing these challenges and building upon successful collaborative efforts, the NDMA can further strengthen its role as a key player in disaster risk reduction and emergency response, ensuring the resilience and safety of the Pakistani population in the face of future disasters.

5.2 Recommendations:

1. The research findings highlight NDMA's strength in responding to disasters, indicating its experience and effectiveness in managing crises. However, it also suggests that there is room for improvement in disaster preparedness efforts. This implies a need for enhancing proactive measures to mitigate and prepare for disasters before they occur.
2. The research findings suggest that NDMA needs to improve its engagement with organizations, particularly by allowing them to fill gap areas in disaster management. It highlights the strength of NDMA in terms of its wide outreach, indicating its ability to reach a broad range of stakeholders. This suggests that NDMA's strength lies in its network and ability to connect with various organizations and stakeholders.
3. The strengths of NDMA identified in the research findings include its wide outreach and linkages with the armed forces, enabling it to provide a first response during emergencies. The presence of protocols and coordination mechanisms for emergency response is also noted. However, it is acknowledged that NDMA requires additional capacity and resource support, suggesting areas for improvement in terms of enhancing its capabilities.
4. The research finding points out several areas that present challenges and gaps in the partnership between NDMA and international organizations/NGOs. These include a lack of political will, a shortage of trained construction workforce, inadequate monitoring and evaluation capacities for risk analysis and reduction, corruption, and a lack of apathy. The text suggests that international organizations can contribute to addressing these challenges by working on policymaking, contingency plans, and construction mechanisms in partnership with NDMA.
5. The research finding recommends that NDMA should communicate regularly to enhance its media engagement and communication strategies during disasters. This suggests a need for more consistent and proactive communication efforts.
6. The effectiveness of NDMA in incorporating scientific research and evidence-based

approaches into its disaster management practices can be enhanced through collaborations between researchers and practitioners, knowledge exchange mechanisms, interdisciplinary approaches, and ongoing training and capacity building. The importance of evidence-based decision-making and research addressing specific regional needs is emphasized.

7. Every stakeholder should revise their responsibility and should work on resilience and risk reduction, where they need improvement because risk reduction is a collective effort. Unless and until everyone is working, the goal of a resilient Pakistan will not be achieved.

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Questionnaires for the Stakeholders.

Appendix 1

Questionnaire Designed for International Organizations and NGOs:

1. How does the NDMA engage with international organizations and NGOs in disaster management efforts?
2. What has been the experience of international organizations and NGOs in collaborating with the NDMA?
3. What are the areas of strength and areas for improvement in the partnership between the NDMA and international organizations/NGOs?

Appendix 2

Questionnaire Designed for Academia:

1. From a research perspective, what are the key areas of strength and weaknesses in the NDMA's disaster management strategies and policies?
2. How effectively does the NDMA incorporate scientific research and evidence-based approaches into its disaster management practices?
3. What gaps or areas of improvement exist in the collaboration between the NDMA and academic institutions in the field of disaster management?
4. What research studies or assessments have been conducted to evaluate the effectiveness and impact of the NDMA's disaster management initiatives?
5. Are there any specific academic recommendations or best practices that can be suggested to enhance the NDMA's disaster management efforts?
6. How does the NDMA engage with academia to leverage their expertise in disaster risk reduction, resilience building, and disaster management training and education?
7. Are there any opportunities for collaborative research projects between academia and the NDMA to address specific challenges or knowledge gaps in disaster management?
8. How can academia support the NDMA in developing and implementing capacity building programs for disaster management at various levels?
9. What role can academic institutions play in providing technical expertise and guidance to the NDMA during disaster response and recovery operations?
10. Are there any academic studies or insights that shed light on the social, economic, or

environmental impacts of disasters in Pakistan and their implications for the NDMA's disaster management approach?

11. How can academia contribute to enhancing the NDMA's preparedness for emerging challenges, such as climate change-induced disasters?

Appendix 3

Questionnaire Designed for Media Personnel:

1. How effectively does the NDMA communicate with the media during disaster events and emergencies?
2. What is the level of transparency and timeliness in the NDMA's communication and provision of information to the media and the public during disasters?
3. How does the NDMA collaborate with media outlets to disseminate accurate and timely information to the public during disaster situations?
4. Are there any challenges or concerns regarding the accessibility and availability of NDMA representatives for media interviews and inquiries during disaster events?
5. How does the NDMA handle media inquiries and requests for information during disaster response and recovery operations?
6. What steps has the NDMA taken to ensure the accuracy and reliability of information shared with the media and the public during disaster situations?
7. Are there any mechanisms in place for the NDMA to address and correct misinformation or rumours that may circulate during disasters?
8. How does the NDMA engage with media organizations to raise awareness about disaster preparedness, risk reduction, and resilience-building initiatives?
9. What are the media's perceptions regarding the NDMA's transparency, responsiveness, and overall performance in disaster management efforts?
10. Are there any recommendations or areas for improvement in the NDMA's media engagement and communication strategies during disasters?

Appendix 4

Questionnaire Designed for NDMA Officials:

Q.1 how would you explain the term “Disaster Risk Governance”? In your valuable opinion, what essential elements are needed in Disaster Risk Governance? What, in your kind understanding, is the difference between Disaster Risk Governance and Disaster Risk Management?

Q.2 According to your thoughtful understanding, has the NDMA been successful in carrying out its mandate efficiently?

Q.3 In your learned opinion, what is the extent of quality-of-service delivery provided by NDMA?

Q.4 According to your gentle thought, what significant role is being played by NDMA in managing disasters? What significant role is played by NDMA in the domains of infrastructure reconstruction?

Q.5I would like to know your valuable opinion about the efficiency of the NDMA in terms of the availability and utilization of funds to achieve its set targets?

Q.6I am looking for your kind consideration of my question to let me know about if these plans have been executed as per plan, then to what extent?

Q.7To the best of your understanding sir/ma'am, what hurdles and challenges were there while fulfilling those objectives?

Q.8I would like to get your take on the existing institutional capacities, particularly with respect to the 1.Human Resource, 2.Technical Resources, 3.Financial Resources? Does NDMA have enough existing institutional capacities to deal with a disaster?

Q.10 what, in your opinion, is the institutional framework for disaster risk management in Pakistan?

Q.11 According to your valuable knowledge, how far NDMA has been successful in minimization of reliance pattern of National, sub national and district level administration?

Q.12 To what extent DDMA's have been successful in building resilience at local level?

Q.13how has 18th amendment contributed in tackling the disasters in terms of responsibility and authority of NDMA? How did it help in service delivery of NDMA?

Q.14 is there any need to reform the community level development with respect to disaster management?

Q.15 How much functional the local administration is, in order to cope with the disasters?

Q.16.Does community at local level have such capacity to cope with the disasters on its own?

Q.17. Would you please let us know that how much capable is the NDMA, in terms of normalizing risk reduction into development?

Q.18 what do you think, what should be the role of other stakeholders in disaster risk reduction?

1. How does the NDMA engage with international organizations and NGOs in disaster management efforts?
2. What has been the experience of international organizations and NGOs in collaborating with the NDMA?
3. What are the areas of strength and areas for improvement in the partnership between the NDMA and international organizations/NGOs?

Questionnaire Designed for Academia:

1. From a research perspective, what are the key areas of strength and weaknesses in the NDMA's disaster management strategies and policies?
2. How effectively does the NDMA incorporate scientific research and evidence-based approaches into its disaster management practices?
3. What gaps or areas of improvement exist in the collaboration between the NDMA and academic institutions in the field of disaster management?
4. What research studies or assessments have been conducted to evaluate the effectiveness and impact of the NDMA's disaster management initiatives?
5. Are there any specific academic recommendations or best practices that can be suggested to enhance the NDMA's disaster management efforts?
6. How does the NDMA engage with academia to leverage their expertise in disaster risk reduction, resilience building, and disaster management training and education?
7. Are there any opportunities for collaborative research projects between academia and the NDMA to address specific challenges or knowledge gaps in disaster management?
8. How can academia support the NDMA in developing and implementing capacity building programs for disaster management at various levels?
9. What role can academic institutions play in providing technical expertise and guidance to the NDMA during disaster response and recovery operations?
10. Are there any academic studies or insights that shed light on the social, economic, or environmental impacts of disasters in Pakistan and their implications for the NDMA's disaster management approach?

11. How can academia contribute to enhancing the NDMA's preparedness for emerging challenges, such as climate change-induced disasters?

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