

National Disaster Management Act, 2010 of Pakistan: A Review

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ARTICLE INFO	ABSTRACT
<p>REVIEW ARTICLE</p> <p>Article history: Received: 23 Feb. 2020 Revised: 20 Jan. 7 2021 Accepted: 7 Feb. 2021</p> <p>*Corresponding author: Arshad Ali</p> <p>Address: CE Wing, MCE, National University of Sciences and Technology, Islamabad, Pakistan</p> <p>Email: aliarshad08@yahoo.com</p> <p>Tel: +905071175956</p>	<p>Introduction: Pakistan has suffered from the worst ever natural and artificial disasters in its history since the start of this century. These disasters caused widespread loss of life, property, and resources; moreover, a high level of social and psychological imbalance was also experienced. The only law available in the country to handle disaster situations was response-oriented, and in the aftermath of the Kashmir earthquake in 2005, the government was forced to review its laws dealing with disasters. To provide a complete spectrum of Disaster Risk Management (DRM) at national level, National Disaster Management Ordinance (NDMO) was promulgated in 2006. NDMO was ratified by the parliament naming it as National Disaster Management Act (NDM Act), 2010 of Pakistan with the purpose to reduce the risks and manage the future disaster situations effectively and efficiently. The purpose of this paper is to review in detail the (NDM Act), 2010 of Pakistan and ascertain the limitations with a view to proffer necessary recommendations.</p> <p>Methods: The study is based on secondary data and detail review of NDM Act 2010, of Pakistan.</p> <p>Discussion: The detail study of NDM Act, 2010 reveals that the Act was either prepared in haste or by a team lacking the requisite expertise on the subject due to certain glaring ambiguities within the contents of various sections. Initially the Act appears to be reactive in nature as there is no mention of disaster risk reduction measures. Lack of accountability mechanism makes the implementation phase susceptible to deviant workplace behaviors. Details of financial allocations for the lower level disaster management authorities (district, union and town), who are the initial responders have been missed out.</p> <p>Conclusion: Owing to lack of political and economic constraints supplemented with corruption, the effectiveness of policies and plans formulated under the guidelines of NDM Act, 2010 will always remain doubtful. Thus, the early revision of NDM Act, 2010 of Pakistan is recommended.</p> <p>Keywords: Disaster, Disaster risk reduction, Disaster management, NDM Act</p>

Introduction

Human beings have been experiencing adverse and unconceivable effects of sudden and unavoidable natural phenomena like earthquakes, floods, epidemics, droughts, and others because of this world's creation. These unavoidable circumstances or events are caused by naturally

occurring geologic processes taking place throughout the earth's history. The threat of these naturally occurring events having a negative effect on humans is known as a hazard. In contrast, various terms like a cataclysm, catastrophe, calamity, devastation, destruction, and disasters are

being used to harm human beings' harmful or negative effects. The term *Disaster* has been derived from the Latin word *Astrum*, which means 'star.' Ancient people believed that the heavens mandated earthquakes, floods, and droughts. Even recently, humankind does not have much control over these naturally occurring circumstances (disasters). The phenomenon of disaster has been defined by several scholars and organizations with slight variances. E.g., "*Disaster is a crisis that far exceeds the capabilities.*" (1). In contrast, the Asian Disaster Reduction Center (2) has defined disaster as "*A serious disruption of the functioning of society, causing widespread human, material or environmental losses which exceed the ability of affected society to cope on its resources.*" In both, definitions of disasters are described by what they do to the people. Primarily, human beings were exposed to natural hazards/disasters only, but with scientific advancements, mankind is now faced with technological disasters.

The surge in the frequency and intensity of both human-made, natural and hybrid disasters and the increasing vulnerability of humankind to the adverse impacts has become a critical challenge for researchers, scholars, and the states to study, understand and focus on disaster risk reduction measures (DRR).

A brief overview of disasters in Pakistan

Since the start of this century, Pakistan has experienced the worst ever kind of disasters, for example, floods of 2003, 2005, 2010, the Kashmir earthquake in 2005, and Gayari avalanche in 2012, exposing the vulnerabilities of different segments of people and communities all over the country. At present, Pakistan is in the top ranking of most vulnerable states.

Pakistan is at high risk from various natural and human-made hazards. Floods, earthquakes, heavy rains, landslides and avalanches, droughts, urban fires, accidents, and terrorism adversely affect vulnerable communities. Pakistan was declared the most affected country in 2010 (3). Since inception, Pakistan has been struck fourteen times by cyclone between 1971–2001 and seven major floods from

1950–2010 (4). The devastation caused by the 2010 flood was unprecedented, with an approximate death toll of 2000 people. Heavy rains in 2011 and 2012 resulted in huge losses to property and life. However, the Kashmir earthquake in 2005 was the most devastating disaster in which more than 73,000 people were killed, over 79,000 were seriously injured and over 3 million people were rendered homeless.

Approaches to disaster risk management in Pakistan

The calamity act 1958 was the first strategy adopted to deal with disaster situations and was a reactive approach. All disasters till 2006 were handled under the calamity act 1958 by the government of Pakistan. Various institutions under this act were delegated different and overlapping roles and responsibilities. However, in the aftermath of the 2005 Kashmir earthquake, a dire need was felt at the top level of government functionaries to lay down an appropriate policy and create institutional arrangements to minimize losses from imminent calamities. The requirement was met by promulgating the National Disaster Management Ordinance (NDMO) 2006, which was the initial serious effort towards cohesive disaster management (5). With the mutual effort of various federal ministries, United Nations agencies, and some NGOs National Disaster Risk Management Framework (NDRMF) was framed in 2007, offering strategic guidance for disaster management in the country (5). The NDRMF identified mainly institution capacity building, mass awareness, establishing training workshops, risk assessments, and others.

However, disaster management in Pakistan has been often highly disorganized due to the overlapping roles and responsibilities of the various government agencies, like power development, defense forces, emergency cells and different national and international NGOs (6).

By the Act of parliament NDMO 2006 was enacted as law and renamed as National Disaster Management Act (NDM Act), 2010 (7). This study is intended to carry out a deliberate assessment of

the NDM Act's effectiveness, 2010 of Pakistan, highlighting its limitations and suitability.

Materials and Methods

The methodology includes a critical review of different National Disaster Management Act (NDM Act) sections, 2010 of Pakistan.

Overview of NDM Act, 2010 of Pakistan

National Disaster Management Act (NDMA) is Act no XXIV and was promulgated by the

parliament on December 11, 2010. It is enforced in ex post facto status from August 17, 2007. This Act does not supersede previous legislations. It is a 21-page document including the cover page, which gives the title, scope, and dates of initiation of the Act and consists of 11 chapters which are further subdivided into 48 sections. The Act can be broadly divided into six categories mentioned in Table 1. below.

Table 1. NDM Act, 2010 of Pakistan

1.	Title, scope, and date of enforcement of Act	Section 1
2.	Definitions	Section 2
3.	Establishment of institutions and development of plans	Section 3-28
4.	Financial aspects	Section 29-32
5.	Offenses and penalties	Section 33-36
6.	Miscellaneous issues	Section 37-48

Section 1

The title "National Disaster Management Act, 2010" encompasses the whole of Pakistan, and the date of its enforcement, i.e., August 17, 2007, is given in this section.

Section 2

Defines thirteen different terms being used in the document, e.g., 'disaster,' 'disaster management' and 'affected area' mentioned in the Act.

Section 3-28

These sections deal with the establishment of institutions and the development of plans providing a three-tier hierarchal structure.

Section 29-32

To meet the financial requirements in threatening disaster situations National Disaster Management Fund (NDMF) is established (Section

29), which is funded through federal grants (Section 31), loans, and aid from national and international donors. Similarly, Provincial Disaster Management Funds (PNDF) are established for dealing with disaster issues in Provinces (Section30).

Section 33-36

Punishments for the following offenses are covered in these sections.

- For obstruction (Section 33)
- For false claim (Section 34)
- For false warning (Section 35)
- Failure of the officer in duty (Section 36)

Section 37-48

The sections of the Act cover miscellaneous items, dealing with compensation, the delegation of powers.

Table 2. Detail review of the NDM Act 2010 of Pakistan

Row	Role	Composition
First tier	National Disaster Management Commission (NDMC) (Section 3)	Act as disaster management of policy-making body in the country (Section 6)
		<p>Chairperson Prime Minister</p> <p>Members</p> <ul style="list-style-type: none"> ▪ Leader of opposition in Senate and National assembly ▪ Important federal cabinet ministers, i.e., finance, defense, health, interior, communications, and foreign affairs ▪ Governor KPK for FATA ▪ All provincial chief ministers ▪ Prime Minister of Azad Kashmir ▪ Chief executive of GB ▪ Chairman Joint chief of staff committee ▪ A member of civil society
Second tier	National Disaster Management Authority (NDMA) (Section 8)	<ul style="list-style-type: none"> ▪ To prepare a National disaster management plan for the country (Section 10) ▪ To ensure <ul style="list-style-type: none"> - implementation - coordination & - monitoring of the policies and plans at the national level (Section 9)
	Provincial Disaster Management Commissions (PDMC) (Section 13)	<ul style="list-style-type: none"> ▪ Lay down provincial disaster management plan under the guidelines of the national commission
	National Institute of Disaster Management (NIDM)	<ul style="list-style-type: none"> ▪ Training, research, and development (Section 26)
	National Disaster Response Force (NDRF)	<ul style="list-style-type: none"> ▪ Special response in threatening situations (Section 27)
Third tier	Provincial Disaster Management Authorities (PDMA) (Section 15)	<ul style="list-style-type: none"> ▪ Lay down provincial plans. (Section 17) ▪ Lay down district plans (Section 21)
		<p>Director general To be appointed by the federal government</p> <p>Chairperson Chief Minister</p> <p>Members</p> <ul style="list-style-type: none"> ▪ Leader of opposition and one member to be selected by him ▪ One member to be designated by chief minister <p>Under the control of the National Authority</p> <p>Director-General or Provincial relief commissioner To be appointed by the provincial government</p> <p>Chairperson</p> <ul style="list-style-type: none"> ▪ Head of the local council, ▪ DCO, DPO, EDO health

Limitation of NDM Act, 2010 of Pakistan

As discussed above, till 2006, all disaster situations in Pakistan were dealt with a reactive approach, i.e., calamity act 1958 till the promulgation of the national disaster management Act 2010 in the aftermath of the Kashmir earthquake 2005 in Pakistan. In contrast, Hyogo Framework for Action was adopted in Jan 2005. Next to above, it appears that this Act was ratified to overcome the deficiencies in the previous legislation related to disasters and provide an integrated system of disaster management at the national level. Yet, the aim stated on the Act's cover page is "to provide an effective disaster management system in the country."

After carrying out the document's detailed study, several shortfalls have been observed in the Act. First of all, the Act's objectives are not specified, which means that actions required to achieve the aim are not defined. Furthermore, while going through the definitions (Section 2) in the definition of disaster (Section 2b), the use of terms human-made and accidental side by side is mere repetition. An occurrence in any spectrum is attributable to either natural or human-made causes; hence the use of the word "accidental" can only be termed as the reiteration of an already stated reason. Likewise, to declare a happening as a disaster, it is important to quantify how exceeding limits would classify the occurrence as a disaster. Therefore, using the word "substantial" needs to be substituted with appropriate expressions that could provoke the initiation of actions by concerned agencies to undertake a certain course of action.

The Act appears to be reactive in nature while going through the definition of disaster management (Section 2c), which states that "Managing the complete disaster spectrum, including preparedness; response; recovery and rehabilitation; and reconstruction" suggesting that the Act responds both in proactive and reactive mode to the disasters.

The definition of disaster management (Section 2c) is also void of prevention and mitigation measures (Disaster Risk Reduction

measures) which are essential elements of the disaster management cycle. As per United Nations International Strategy for Disaster Reduction, mitigation measures are defined as "The lessening or limitation of the adverse impacts of hazards and related disasters," but in Section 6e, the stated power of NDMC is "arrange for, and oversee, the provision of funds for mitigation measures, preparedness, and response" which is an indirect reference of disaster Risk Reduction measures. However, in Act, the term mitigation mentions the actions taken to avoid a secondary disaster.

UNISDR defines prevention as 'the outright avoidance of adverse impacts of hazards and related disasters'. Whereas in the National Plan (Section 10 a, b, c), slight mention of the term is given as "integration of mitigation measures in the development plans"; "preparedness and capacity building to effectively respond to any threatening disaster situation or disaster," mentioning the proactive and corrective approaches in the national plan.(7)

The provincial authorities are empowered (Section 16 c). Moreover, concrete disaster risk reduction measures are mentioned in local authority functions (Section 25 1c). Next to the above two clauses of the Act provides a complete spectrum of disaster risk management dealing with proactive and reactive approaches.

While reviewing disaster risk management and focusing on term management in isolation, it can be defined as "coordinated efforts of people to accomplish set goals and objectives using available resources efficiently and effectively." Hence, effectiveness is achieved by the formulation of laws, policies, and implementation. Whereas efficiency is related to the use of resources in terms of finances, material, efforts, and time during the implementation phase.

The fact was identified in the global review (8) deliberately; thus, it can be argued that dedicated availability and efficient usage of resources play effects the plan. Although the disaster management funds at both the national level (Section 29) and provincial levels (Section 30) have been recommended, there is no fund

dedicated at the district level. Moreover, there is no allocation of the dedicated amount in the annual budget disaster management activities.

Accountability plays a significant role in achieving effectiveness and efficiency, whereas Section 43 bars the judiciary to question the Act's actions. Officials have been indemnified from accountability for their actions taken in good faith (Section 44), resulting in interpersonal or organizational workplace deviances (9).

The inefficient and disorganized management of the 2010 floods exposed the disaster managers' serious negative deviant behavior at the helm of affairs. Such behaviors and organizational failures were also witnessed during the disaster management of the 2005 earthquake when there was no legislation regarding disaster risk management.

Comparing the management of various disasters by the disaster managers before the 2005 earthquake and after the 2007 Cyclone Yemyin, the 2010 Hunza Lake disaster, the 2010 floods, the Karachi garment factory fire 2012, the Lahore LDA building fire 2013, and most recently, the Awaran earthquake 2013, and the promulgation of NDM Act of Pakistan 2010, it can be argued that actually nothing has improved in terms of efficiency and effectiveness of disaster risk management measures. Moreover, following flaws were observed by the judicial commission set up by the Supreme Court of Pakistan in the aftermath of the 2010 floods (10).

- NDMA had not fulfilled its obligations for the pre-disaster phase.

- NDMA did not follow the PDMA and DDMA to accomplish their assigned tasks and roles.

- NDMA did not report its failure of accomplishing its assigned tasks and roles to the National Commission or the Parliament.

- The absence of early modern warning and forecasting systems was identified as a grey area in the disaster risk reduction policies and practices marked.

- Lack of a well-defined strategic plan at the national level, which had to establish a framework

for the Provincial level plans, exposed the ad hoc approach prevailing in the disaster management authorities (5).

Discussion

Public and private organizations miserably fail to ensure coordinated effort while responding to disasters in the country. Furthermore, overlapping roles and responsibilities of various government institutions have induced a downward pull on the overall, increasing the affected people's sufferings. To evade responsibility, all the governments have done in the past have referred to disasters as "Act of God" and "punishment for wrongful deeds of people" (11). The belief is evident that Pakistan's government is often focused on post-disaster activities, i.e., search, rescue, food distribution, provision of shelters, and monetary compensation. In Pakistan, most of the educated class, government functionaries, and policy makers were not versed with the term disaster management, especially terms and practices related to the pre-disaster phase, i.e., prevention, mitigation, and preparedness.

The effectiveness of the first legislation, i.e., the national disaster management ordinance in 2006, was tested in 2010 floods, which exposed government organizations' inefficient and disorderly response (12). These governments were not only marred with minor interpersonal and organizational deviant workplace behaviors, e.g., showing favoritism, resource waste, and sluggish working but also infested with serious deviant workplace behaviors, e.g., stealing, corruption, accepting kickbacks, and criminal negligence.

Although the laws about disaster risk reduction in Pakistan are developed by integrating best practices of international standards, plans, and deliberate consultation with different stakeholders, i.e., international agencies related to DRR, UN agencies, NGOs, and various public and private organizations. However, the inability and reluctance are visible by the government machinery dealing with disaster risk management. Promulgation of laws, development of strategies,

policies, and plans are among the first steps, yet to maintain the balance, effective and efficient implementation of these laws, policies, and plans is mandatory.

Various techniques can be adopted for effective and integrated DRR, and DRM approaches in Pakistan, as follows:

- Creating awareness community, government functionaries, and policymakers
- Capacity building of communities and institutions
- Amendments in the present laws, policies, and plans
- Supplementing the role of civil society

Recommendations

Laws are prepared for a specific environment and a given time frame to regulate people's actions, but both the elements' environment and time are not constant. Thus, laws must be reviewed and amended from time to time to maintain their effectiveness. Following recommendations can provide a stage for the future course of action.

- Formulation and addition of well-defined objectives to 'Section 1' should be done.
- In 'Section 2'
 - The term "disaster" should be redefined to remove duplication of similar terms, i.e., 'man-made' and 'accidental'.
 - The stated definition of "disaster management" should focus on the reactive approach, and it must be revised to add the element of prevention and mitigation from the DRR point of view.
 - The definitions of hazards, prevention, and mitigation should be added.
- Chapters focusing on disaster prevention and prevention plans must be added.
- Tehsil and town level are the lowest tiers of administrative authorities having direct interaction with communities. Deliberate plans, roles, and responsibilities should be formulated for these tiers.
- All the action under this Act must be made accountable in some court of law to attain efficiency and effectiveness in real sense.

- Clauses regarding early warning and forecasting should be reviewed for modern systems.

- Special recourse allocation of all tiers should be done in annual budgets.

- To achieve integrated and coordinated efforts, overlapping responsibilities about various institutions be addressed, and effective communication plans be formulated.

- Special emphasis should be given to increase community awareness, especially the policy makers and those who play a vital role in the implementation phase of DRR and DRM.

Conclusion

As Pakistan is a high-risk state concerning disasters, promulgated laws and articulated strategies, policies, and plans must be performed to adopt the best DRR practices from international standards and policies. However, due to economic constraints, corruption, and lack of political will, these policies and plans' effectiveness becomes ambiguous. Finally, it can be induced that despite preemptive DRR policies, the implementation phase is focused on a reactive approach in Pakistan, resultantly creating a critical imbalance and increasing the suffering of the disaster-affected people.

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Conflict of interest

The author declares no conflict of interest.

Authors' contribution

All authors contributed to this project and article equally. All authors read and approved the final manuscript.

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