



**SPECIAL STUDY ON –
PREPAREDNESS AND RESPONSE OF
PDMA BALOCHISTAN ON MAN-
MADE DISASTERS
Audit Year 2017-18**

AUDITOR GENERAL OF PAKISTAN

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ACRONYMS AND ABBREVIATIONS

ADB	–	Asian Development Bank
AJ&K	–	Azad Jammu and Kashmir
DCO	–	District Coordination Officer
DDMA	–	District Disaster Management Authority
DDMP	–	District Disaster Management Plan
DEOC	–	District Emergency Operation Centre
DM	–	Disaster Management
DRA	–	Disaster Risk Assessment
DRR	–	Disaster Risk Reduction
DRM	–	Disaster Risk Management
DRMF	–	Disaster Risk Management Fund
EOC	–	Emergency Operation Centre
FATA	–	Federally Administered Tribal Areas
FC	–	Frontier Corps
FDMA	–	FATA Disaster Management Authority
GBDMA	–	Gilgit Baltistan Disaster Management Authority
ISSAIs	–	International Standards of Supreme Audit Institutions
INGOs	–	International Non-Government Organizations
NDMA	–	National Disaster Management Authority
NDMA Act	–	National Disaster Management Authority Act
NDMC	–	National Disaster Management Commission
NDMP	–	National Disaster Management Plan
NDRP	–	National Disaster Response Plan
NGOs	–	Non-Government Organizations
PC-I	–	Planning Commission form I
PDMA	–	Provincial Disaster Management Authority
PDMCs	–	Provincial Disaster Management Commissions
PDMF	–	Provincial Disaster Management Fund
PEOC	–	Provincial Emergency Operation Centre
SDMA	–	State Disaster Management Authority
SOPs	–	Standard Operating Procedures
UC	–	Union Council
UN	–	United Nation

PREFACE

The Auditor General conducts special studies under Articles 169 and 170 of the Constitution of the Islamic Republic of Pakistan 1973, read with Section 10 of the Auditor General's (Functions, Powers and Terms and Conditions of Service) Ordinance 2001.

The Directorate General Audit (Climate Change & Environment) conducted the special study on Preparedness and Response of PDMA Balochistan on man-made Disasters.

The scope of the study is to assess the preparedness and response of PDMA Balochistan on man-made disasters. The Special Study indicates shortcomings, specific actions, and recommendations that, if taken, will help the management and policymakers to achieve the objectives of disaster management in Balochistan.

The Special Study is submitted to the Governor of Balochistan in pursuance of Article 171 of the Constitution of the Islamic Republic of Pakistan 1973, for causing it to be laid before Provincial Assembly.

S/d-

[Javaid Jehangir]

Auditor -General of Pakistan

Dated: 15th July, 2020

EXECUTIVE SUMMARY

The Directorate General Audit, Environment, Islamabad carries out the audit of all Disaster Management Organizations at National, Provincial and District levels. The office is mandated to conduct regularity audit, financial attest, compliance with authority audit, an audit of sanctions and propriety, performance audit and special study of all Disaster Management Organizations. The office is presently located at Islamabad. The office is headed by a Director General (BPS-20).

The Director General Audit (Climate Change & Environment) conducted a special study on Preparedness and response of PDMA Balochistan on man-made Disasters in accordance with relevant guidelines issued by the Department of the Auditor General of Pakistan, Asian Development Bank and the International Standards of Supreme Audit Institutions (ISSAIs).

Disaster can strike any part of the world at any time. It may be the result of natural (e.g. floods) or man-made (e.g. nuclear accidents) causes. It can occur suddenly (e.g. earthquakes) or develop slowly (e.g. drought). Whatever the cause, the human and economic impacts of a disaster are considerable.

Pakistan is susceptible to both natural and man-made disasters. The geography of Pakistan is diverse and it is prone to different geographic vulnerabilities. Hence, the country in general and, the province of Balochistan in particular, is vulnerable to both forms of disasters (natural and man-made).

The study has been conducted to assess the preparedness and response of PDMA, Balochistan on man-made disaster. For the purpose, activities and responses of PDMA, Balochistan on man-made disaster were studied/analyzed in light of relevant guidelines/standards and results thereof are incorporated in the report. It is pertinent to mention here that no record of either budget allocation or expenditure of organization were provided either at the PDMA level or district level. The following issues of potential significance were observed:

- i. Separate legislation for Disaster Management in Balochistan was not made.
- ii. Specific Provincial man-made disaster plan along with contingency plans were not prepared.
- iii. No Risk and vulnerability Assessment towards man-made disaster was made.
- iv. Financial Resources / Management DRM fund did not exist.
- v. Prevention measures for man-made disasters by PDMA Balochistan were not adopted.
- vi. Coordination between PDMA and other Government departments dealing with disaster was weak.
- vii. Strengthening of Provincial Emergency Operation Center and District Emergency Operations Centre were quite weak
- viii. There was an inadequate Disaster Response Force at PDMA Balochistan
- ix. Rescue -1122 organizational setup for immediate rescue for treatment and caring of victims did not exist.
- x. There was no Disaster Management staff at DDMA Level.

Recommendations

It is recommended that:

- i. PDMA Balochistan should immediately prepare Provincial Disaster Management Act for approval by the Balochistan Assembly. The act specifically should cover man-made disaster.
- ii. PDMA Balochistan may update Provincial Disaster Management Plan keeping a special focus on man-made disasters besides natural disasters and get it approved from PDMC and implement the said.
- iii. There is a need to prepare a specific contingency plan to deal with man-made disasters effectively in the province.
- iv. PDMA may conduct detail risk assessment study at provincial level with reference to man-made disasters and root causes need to be identified for effective enforcement and preventive measures.

- v. Meeting of Provincial Disaster Management Commission may be called to express strong commitment by policymakers towards managing disasters in the province.

Section-I

1 Introduction

The Director General, Audit (Climate Change Environment), Islamabad is mandated to conduct regularity audit, Financial Attest Audit, performance / Project audit and special study of the projects / departments given under its scope vide office of the Auditor General of Pakistan letter no.1714-Dir (A)/2-9/2015-II dated 13-11-2015.

The Director General Audit (Climate Change & Environment), Islamabad conducted a special study on “preparedness and response of PDMA Balochistan on man-made disasters” during the year 2017-18.

Pakistan, unfortunately, is among those countries where disasters are a regular feature. The earthquake of 2005 which played havoc with human lives and economy signified the need for preparedness to deal with natural and man-made disasters besides pointing out vulnerabilities as a result of catastrophe.

After 2005 earthquake, National Disaster Management Ordinance (NDMO) was promulgated in 2007 which, after the approval of the Parliament, became the National Disaster Management Act 2010. As disaster management is a provincial subject, therefore, all the provincial assemblies adopted the national law. After the promulgation of NDMO 2007, a complete structure of disaster-fighting mechanism was established in the country. Now disaster management organizations are present at three levels in Pakistan. At the national level, these are National Disaster Management Commission and National Disaster Management Authority; at the provincial level, these are Provincial Disaster Management Commissions and Provincial Disaster Management Authorities; and at the district level, these are District Disaster Management Authorities.

NDMA was established under the National Disaster Management Act 2010 and performed functions under the supervision of National Disaster Management Commission (NDMC). National Disaster Management Authority is an autonomous and constitutionally established Federal Authority mandated to deal with the whole spectrum of Disaster

and their management in Pakistan. NDMA acts as implementing, coordinating and monitoring body for disaster management. Provincial Disaster Management Authorities (PDMA) are constitutionally established provincial authorities mandated to deal with the whole spectrum of disaster and their management in the respective province. At present four PDMAs are engaged in Disaster Management activities in the respective provinces. Besides, PDMAs, FDMA, SDMA, and GBDMA are involved in the disaster management activities in FATA, AJK&K and Gilgit Baltistan respectively. District Disaster Management Authorities (DDMAs) are established at each district to deal with disaster and their management in the district. DDMA shall work as the district planning coordinating and implementing body for disaster management and takes all measures for the purposes of disaster management in the districts in accordance with the guidelines laid down by the NDMA and PDMA. DDMAs are the direct implementing and monitoring units.

Balochistan is one of the most vulnerable province of Pakistan in terms of man-made disasters especially terrorism, civil unrest, power disruption, and road accidents. Quetta and Gwadar, districts being the emerging hub for industrial and trade activities were selected to study the preparedness of Balochistan government in dealing with man-made disasters.

The special study on “preparedness and response of PDMA Balochistan on man-made disasters” was planned in the Audit Plan for the year 2017-18 and conducted in April 2018. The purpose of the study was to check the preparedness and response of PDMA Balochistan and DDMA Quetta and Gwadar for managing and responding to man-made disasters and to assess whether preparedness was sufficient as per prevailing standards and plans and response was as per actual preparedness standards and plans.

1.1 Define Study

There are two broad categories of disasters i.e Natural & man-made, both have a deep impact on the community. This study is focused on man-made disasters, its impacts and how to overcome such impacts. Balochistan is among the most vulnerable provinces of Pakistan in terms

of man-made disasters especially terrorism, civil unrest, power disruption, and road accidents. Quetta and Gwadar are two emerging hubs of industrial & trade activities besides being main districts of Balochistan which are more vulnerable to different types of man-made disasters including terrorism, civil unrest, Workplace fires, industrial and road accidents.

1.2 Purpose and scope of Study

The study was conducted to:

- a. To check the preparedness of PDMA Balochistan and selective DDMA's (Quetta and Gwadar), for managing and responding to man-made disasters. Whether preparedness for man-made disasters is sufficient as per prevailing standards and Plan.
- b. Assess the response of PDMA Balochistan and DDMA's against the selected man-made disasters as to whether, the response was as per actual preparedness, standards & plan.

i. Responsible authorities

Provincial Disaster Management Authority, Balochistan
District Disaster Management Authority, Quetta
District Disaster Management Authority, Gwadar

1.3 Study Design

a. Beneficiary of Study

The beneficiaries of the study will be Provincial and District Governments and Pakistan Audit Department.

b. Time Period

The time period selected for the study is from 2016 to 2018. The preparedness and response activities carried out by PDMA Balochistan in the abovementioned period and previous projects / data has also been consulted /commented for the subject study. The working days allocated to the team for the study were 10.

c. Nature of Data

Most of the data relating to this study was qualitative in nature. The team had discussions with personnel's, field visits and observed the working of organizations.

i. **Primary & Secondary Data**

Data like response to questionnaires, focused group discussions, meetings with PDMA and DDMA authorities, policies and procedures, details of equipment available at PDMA and PEOC, details of job descriptions, sanctioned and working strength and vacancy position at PDMA has also been consulted / obtained in the preparation of this study. Websites and publication like NDMA Act, NDMP, NDRP, DRR Sendai Framework, Provincial and District Plans, ADB Guidelines, contingency plans, SOPs & PC-I (1122)

1.4 Methodology

The methodology adopted for obtaining data from the department is as under:

- a. Requisition for the relevant record, files, and documents from the department.
- b. Study of different booklets, contingency plans, and national and provincial climate change policies.
- c. Analysis of targets achieved.
- d. Questionnaire prepared to obtain replies from PDMA and DDMA
- e. Interviews and discussions with Management
- f. Evaluation of replies, responses, and information
- g. Visit to PEOC and different wings

However, due to time and data constraints special attention was given to available data keeping in view the scope of Directorate General Audit (Environment)

1.5 Data Analysis

- i. The team analyzed the plans, policies, and procedures adopted by PDMA and DDMA to deal with man-made disasters. The focus was to evaluate the sufficiency, reliability, and effectiveness of such plans, policies, and

procedure. The main focus of the analysis was of qualitative nature with a view to having knowledge sharing and lesson learned for the future.

- ii. The results / observations specific to preparedness and response activities of the organization were derived / inferred from the data and information obtained as a result of the above methodology.

a. Questionnaire

The interview questionnaire was developed to assess the preparedness and response in an event of a disaster. The replies and available data / record provided by PDMA and DDMA was analyzed to know the version / details of the PDMA and DDMA regarding preparedness and response to man-made disasters.

b. Response to the questionnaire

Total seventeen and eighteen questions were floated to PDMA Balochistan and DDMA Gawadar and Quetta respectively. The percentage of departmental responses to the questionnaire was 100% (PDMA & DDMA Gwadar). However, no response from DDMA Quetta was received.

Section-II

2 Purpose of Organizations (NDMA, PDMA &DDMA)

Pakistan is one of the most disaster-prone countries in the world. A viable systematic process of disaster management manages all disasters which are generally divided into natural and man-made. The organizational structure at National, Provincial and District level is given below: -

a. National Disaster Management Authority (NDMA)

The NDMA, under the National Disaster Management Commission (NDMC), is responsible for devising guidelines and implementing programmes on DRR, preparedness, capacity building, response, and recovery. During disasters, the NDMA acts as a central hub for implementing, coordinating and monitoring disaster management. They communicate with all stakeholders to facilitate a collaborative response to the disaster (including Disaster Management Authorities, Army, Governmental Ministries and Departments, NGOs).

b. Provincial Disaster Management Authority (PDMA)

The Provincial Disaster Management Authority (PDMA) is constituted under the NDM Act (National Disaster Management Act) in 2010. PDMA specializes in mitigation, preparedness and to ensure an organized response to a disaster. PDMA Balochistan also acts as the coordinating authority, which articulates the coordination mechanism between key provincial departments. In case of emergencies, the PDMA works closely with District Governments to organize an initial and subsequent assessment of disaster-affected areas, and determine the course of action to ensure long-term rehabilitation of the affected population.

c. District Disaster Management Authority (DDMA)

The DDMA, under the District Disaster Management Commission (DDMC), is involved in executing the DRR program at the district and tehsil level (second-lowest tier of local government). There are 32 districts in Balochistan and accordingly 32 District Disaster Management Authorities. Out of these 32 district two districts (Quetta & Gwadar) were selected as a sample to execute this study.

2.1 Legislative Framework governing Organization

The Acts, rules & regulations governing PDMA Balochistan includes NDMA Act, National Disaster Management Plan (NDMP), National Disaster Response Plan (NDRP), PDMA Act/Ordinance, Balochistan Disaster Management Authority Rules, 2012, PDMA Provincial DM Plan, DDMA's Plan and other policies, procedures and guidelines issued by the entity from time to time have been referred during study.

Section-III

3 Results

3.1 Separate legislation for Disaster Management in Balochistan

ADB Disaster Management Guidelines provides that a large proportion of disaster-related matters are outside the normal pattern of life especially when we are focusing on man-made disasters. To deal effectively with disaster, therefore, requires a carefully calculated and accurate approach, culminating in a series of countermeasures which involve the government, nongovernment agencies, private sector, and the general public. Seen in this combined and concerted light, counter-disaster action would certainly seem to benefit from an appropriate form of legal backing.

Legislation provides a formal base / foundation for counter-disaster action. In other words, it formally supports plans, organizational arrangements, preparedness measures, response action. This helps to ensure that such responsibilities are properly implemented. Legislation can be made to have a uniform national effect, thus ensure that all levels of the national counter-disaster structure receive the full benefit of its support. Disaster legislation does not need to be complicated to become it effective when implementing on ground¹.

Disaster legislation does not have to conflict with other legislation. The legislation also provides a wide measure of protection for:

- Provincial government that is charged with the responsibility for safeguarding the citizens, as far as possible, from the effects of a disaster;
- organizations and individuals who are required to carry out counter-disaster activities; and
- organizations and individuals who may be affected in various ways by the disaster.

¹ Disaster Mangement, A Disaster Manger's Handbook Asian Development Bank

After the promulgation of the 18th Amendment in the constitution of the Islamic Republic of Pakistan, 1973 the bulk of responsibilities – in both DRR and response – were devolved with the provinces.

PDMA, Balochistan was established in 2007 immediately after the establishment of NDMA. But no legislation for disaster management in Balochistan has so far been made. After the 18th Amendment, it was the responsibility of PDMA to prepare separate Disaster Management Act for the province according to its requirement.

3.2 Specific Provincial Man-made disaster plan for Balochistan

Section 17 of NDMA Act 2010 provides that there shall be a plan for disaster management for every province to be called the provincial disaster management plan. The provincial plan shall include the vulnerability of different parts of the province to different forms of disasters.

The purpose of planning is to anticipate future situations and requirements, thus ensuring the application of effective and coordinated countermeasures. Moreover, planning should not be confined merely to preparedness for and response to specific disaster events; it should cater, as far as possible, for the whole scope of the disaster management cycle.

It is quite evident that where plans did not exist, or where planning was inadequate, then the effects of the disaster on countries and their peoples have been worse than would have otherwise been the case.

There can be little doubt that an effective basis of planning and the maintenance of relevant plans do offer the following advantages:

- Clear and coherent approach to dealing with disaster
- A common reference for all departments and authorities
- Roles in counter-disaster activity;
- The basis for coordinated action;
- Clear allocation of responsibilities;
- Focus for disaster-related training; and
- Review and evaluation of current and future disaster management requirements.

It was observed that the province of Balochistan is more prone to man-made disasters especially terrorist activities. The data shows that a total of 3575 civilians and security officers lost their lives because of a man-made disaster². In this situation, it is very necessary that PDMA should have a separate plan to cater to man-made disaster management. Statistics of fatalities in Balochistan from 2011 to 2017 are as follows:

Years	Civilians	SFs	Terrorists	Total
2011	542	122	47	711
2012	690	178	86	954
2013	718	137	105	960
2014	347	83	223	653
2015	247	90	298	635
2016	251	153	229	633
2017	5	12	6	23
Total	2800	775	994	4569
Natural Disasters (Awaran Earthquake)				
2013	348			348

<https://reliefweb.int/disaster/eq-2013-000121-pak>

PDMA Balochistan has prepared a plan for the province in 2008 called Provincial Disaster Management Plan. Audit noticed that the plan covers only the natural calamities. No little attention was given to man-made disasters. Further, the plan has not yet been approved by the Provincial Disaster Management Commission.

3.3 Non-preparation of contingency plan for man-made disaster

Section 16(2)(c) of NDMA Act, 2010 provides that the Provincial Authority may examine the vulnerability of different parts of the Province to different disasters and specify prevention or mitigation measures. Further, Section 20 (2) (c) states that DDMA may ensure that the areas in the district vulnerable to disasters are identified and measures for the prevention of disasters and the mitigation of its effects are undertaken by

²<http://www.satp.org/satporgrtp/countries/pakistan/balochistan/index.html>

the departments of the Government at the district level as well as by the local authorities.

A multi-hazard approach involves translating and linking knowledge of a full range of hazards into disaster and risk management. It will look not only at natural and man-made hazards, but also factors including political strategies, technical analysis, and operational capabilities and public understanding. A particular community is usually exposed to risk from a variety of hazards. The resulting cumulative risk cannot be tackled effectively if actors plan merely for selected events. Risk assessment approach prior to disasters will ultimately lead to greater effectiveness and cost efficiency. The next step after risk assessment is contingency planning, which is a process of developing strategies, arrangements, and procedures to address the humanitarian needs of those adversely affected by potential crises. Contingency planning involves actions in which individuals and institutions are alertly responsive and responsible. The options are designed prior to disasters.

During the course of study, it was observed that no man-made disaster contingency plan has been prepared by PDMA Balochistan and DDMA's i.e. Quetta & Gwadar. Further, PDMA has only prepared two contingency plans i.e. Monsoon Contingency Plan and Drought Contingency Plan.

3.4 No Risk Assessment Study carried out at Provincial Level towards Man-Made disaster

Section 16 (2) (c) of NDMA Act 2010 provides that PDMA may examine the vulnerability of different parts of the Province to different disasters and specify prevention or mitigation measures;

Disaster Risk assessment is a process to determine the nature and extent of such risk, by analyzing hazards and evaluating existing conditions of vulnerability that together could potentially harm exposed people, property, services, livelihoods and the environment on which they depend. In this way, informed decisions can be made regarding steps to reduce the impacts of disasters.

A comprehensive risk assessment not only evaluates the magnitude and likelihood of potential losses in case of a disaster but also provides a full understanding of the causes and impact of those losses. DRA is an integral part of the decision making process. It, therefore, needs to engage multi-stakeholders from various disciplines and requires close cooperation and collaboration of different organizations and institutions of the target area. There are three major steps involved in Risk Assessment³.

1. Hazard Assessment.

It identifies the types of hazards that have occurred in the area in the past or can occur in the future. This is usually the first step which then defines other steps because for each hazard, different tools and techniques are used for analysis and assessment.

2. Vulnerability Assessment.

Vulnerability Assessment is performed to determine the elements at risk, degree of vulnerability and the causes of the elements at risk. All elements (people, building, resources etc.) which are prone to the hazard are identified and an inventory is prepared. Then the degree of their vulnerability is analyzed and causes of their vulnerability are determined.

3. Capacity Assessment.

Capacity assessment means to identify the strengths and resources available to reduce the level of risk, or the effects of a disaster. In this step, resources of a community are evaluated by analyzing the available strengths like skills, expertise, equipment, infrastructure etc. Then the availability of these resources is evaluated to know how soon these resources can be deployed and become available to use.

Keeping in view the past history and database of man-made disasters in Balochistan, PDMA was required to conduct a risk assessment study for man-made disaster which has not been initiated / conducted till now.

It is recommended that risk assessment is to be carried out covering all districts, Tehsils and even each union council of the province. Each district, Tehsil and UC may be listed down and prioritize with respect to hazard, vulnerability and capacity to cope with disasters.

³<http://www.mnestudies.com/disaster-management/disaster-risk-assessment-process>

3.5 Financial Resources Management-DRM fund

Section 30 (1) of NDMA Act states that the Provincial Government shall, immediately after notification issued for constituting the Provincial Authority and the District Authorities, establish for the purposes of this Act a fund to be called the Provincial Disaster Management Fund.

The most difficult problem in disaster management is to achieve the optimum use of available resources. Financial resources are the backbone of any activity and no single planned activity can be performed without having sufficient financial resources. Man-made disasters are unforeseen which may affect lives and infrastructure, resultantly requiring huge financial resources to cope up the disaster.

Disasters and emergencies also have a major detrimental impact on public finance. Provincial Government is already in a difficult economic situation and also must shoulder substantial repair and rehabilitation costs and provide support to victims.

The Government of Pakistan recently established National Disaster Risk Management Fund at the Federal level to support disaster risk reduction that can enhance Pakistan's resilience to future disasters.

Currently, the PDMA, Balochistan carries out its disaster management activities in the province through financial resources allocated annually in the budget.

It is necessary that Balochistan may have a separate Disaster Risk Management Fund at the provincial level. The fund may be invested in a profitable way. DRMF may enter into insurance arrangements to develop markets for the transfer of residual risk that cannot be mitigated. Further, the fund may provide a common window to pool various contributions from a diverse base of contributors and also serve as a vehicle for donor alignment and coordination by the government.

3.6 Non existence of prevention measures for Man-made disasters by PDMA Balochistan

ADB Disaster Management Guidelines provides that such actions and programs may be designed to impede the occurrence of a disaster or prevent such an occurrence having harmful effects or to reduce the effects of the disaster on communities.

For adopting preventive and mitigation measures, it is required to know the underlying causes of man-made disasters. As there is no specific study / vulnerability assessment in Balochistan, therefore no preventive and mitigation measures have so far been taken by PDMA.

Natural disasters may not be averted under all conditions. But the human misery that is caused can definitely be minimized. However, man-made disasters are preventable. If sufficient preventive measures e.g improved law and order and guidelines/protocols would be in place probability of occurring a man-made disaster will be very low because preventive measures wiped out the underlying root causes. The example of such a measure can be e.g. if the buildings are constructed according to the prescribed by-laws, there would be less chances of collapses. Similarly, if firefighting equipments have been installed and emergency fire exits provided the damage to human beings would be minimized.

Past history and database of Balochistan show that the major man-made disaster is terrorism. Some attacks were on FC and Army check posts whereas as some attacks were on communities on a sectarian basis. PDMA needs to assess all types of man-made disasters occurring in Balochistan by studying the causes which are instigating such activities and their respective preventive and mitigation measures may be taken for peaceful Balochistan.

Complete and appropriate consideration to all aspects of man-made disasters may be aligned with the National Action Plan including immediate and long-term cost-benefit implications to opt for it or not. Preventive measures may be taken in coordination and collaboration with other Government departments and agencies. A strategy be formulated in collaboration with national planning authorities and co-opted specialist institutions, research establishments, technical authorities, government

departments and agencies which may have major public safety responsibilities, along with NGOs, INGOs, and military forces. Moreover, Rescue 1122 may also be established as permanent department instead of a project to serve the community in an event of disaster as first responder.

3.7 Weak coordination between PDMA and other relevant Government departments

ADB Disaster Management Guidelines provides that Optimum coordination between government and non-government agencies (both the in-country and overseas viewpoints) is strongly desirable.

A problem in the direction of response operations is coordinating the various activities undertaken by resource organizations.

Institutional capacity of different government departments / agencies in Pakistan is too limited to deal with disasters, particularly at district and local levels. Lack of coordination of these agencies at the provincial level is the main grey area. There is a lack of focus on preparedness because of the capacity and scarcity of resources. All these factors increase the vulnerability of the local population to different man-made disasters.

The coordination mechanism in PDMA Balochistan is not structured. It was observed that PDMA is reactive in disasters and there are no formal chalked out detailed procedure / mechanism of coordination among different disaster management agencies i.e Civil Defense, Armed Forces, fire services, police, ambulance service, Red Crescent Societies, INGOs, UN and other humanitarian organizations.

3.8 Provincial Emergency Operation Center

National Disaster Response Plan provides that the Provincial Emergency Operations Centre (PEOC) will serve as the hub for receiving early warning and issuing information to response agencies, public, and media etc. The PDMA will also lead the coordination and management of relief operation in affected areas. All the government departments at the provincial level and concerned stakeholders such as civil defense, Armed Forces, fire services, police, ambulance service, Red Crescent Societies,

I/NGOs, UN, and other humanitarian organizations may be coordinated by the PEOC for emergency response.

The PEOC will function throughout the year in disaster and non-disaster times. In disaster times the PEOC will be disseminating early warning information, relief coordination, and management and focus on early recovery. In non-disaster time the focus will be on preparedness and contingency planning. The PEOC will be overall supervised and directed by the Director General, PDMA. The PEOC will be headed by the Chief Coordinator PEOC and supported by the operations, communication, public information, administration, and logistics support teams. PEOC will be working round the clock during the disaster time. In the non-disaster time, PEOC will be working in normal office hours.

The PEOC in PDMA Balochistan is operational having a staff of 18 personnel which includes 7 members of the rapid response team and remaining 11 personnel are non-technical junior officials. The rapid response team is required to respond to the disaster, but unfortunately, the staff is serving in PEOC who has no specialized capacity to operate PEOC. There is no capacity building of staff for optimal utilization of PEOC.

Further, as NDRP requires PEOC to be headed by Chief Coordinator contrary to this PDMA Balochistan is running its PEOC by rapid response staff. Moreover, current PEOC setup at PDMA is performing the dual function of Emergency Center and Rescue 1122 control room, therefore hampering the true spirit of PEOC.

3.9 Non-maintenance of a database of Man-made disaster since the inception of PDMA

All activities performed by disaster management organizations in an event of disaster from start to end i.e response, recovery and rehabilitation required to be recorded in a chronological order. It is also important that data and observations made during the disasters are to be collected and managed throughout an emergency. This may include the creation of a central library or database to store hazard risk information and disaster statistics. The maintenance and updating of such a service are essential. Clear systems for financial data tracking and management

should also be developed and tested in advance. This will not only increase financial and end-user accountability but will also be essential if lessons are to be learned for future responses and forensic purpose. Where possible data is collected, it should also be made publicly accessible.

In response to the questionnaire, PDMA Balochistan stated that no such database has been prepared so far but a brief incident report is being prepared. PDMA may have maintained a complete database duly approved by a competent forum of all disaster events, which should include stepwise all activities conducted by PDMA from start to end.

PDMA should have created a database since its inception for knowledge sharing. Disaster database serves initial information for better disaster preparedness. Disaster database is essential in the evaluation of preparedness systems after a hazard event, and in promoting ongoing learning to enhance systems to develop.

3.10 Inadequate Disaster Response Force at PDMA Balochistan

Section 27 of NDMA Act 2010 states, “There shall be established a National Disaster Response Force for the purpose of specialist response to a threatening disaster situation or disaster.”

During the course of study, it was transpired that there is no such force established to deal with disaster as mandated in NDMA act. However, a rapid response team namely R3T (Rapid, Response and Rescue Team) has been established with contract employees under the Balochistan Disaster Management Project funded by World Bank. The services of these employees have been retained on contract basis after completion of the project in 2016.

The disaster management is not possible without sufficient trained human resource. Currently, PDMA Balochistan is relying on Rapid Response Team which comprises of only 07 members covering the whole province. In an event of a disaster there is dire need of adequate trained relief and rescue teams to help affectees. In the absence of such trained force, PDMA is relying on Pakistan army in the event of disasters.

3.11 Civil Turbulence in Quetta and other districts of Balochistan

The study of past history and database of Balochistan regarding man-made disaster indicates that major districts (Quetta and Awaran) are affected by civil turbulence resulting in fatalities of 3575⁴ civilians and security officers. Usually, it is the responsibility of Police, Paramilitary and Armed Forces to control such events. These departments are working in Balochistan for such disasters. Besides PDMA Balochistan has relief goods and services (Ambulances, Food and Non-Food items) to respond such events.

The above-stated measures are insufficient for civil turbulence being a major issue/event of a man-made disaster in Balochistan. PDMA may have proper planning on the pattern of disaster management cycle i.e. (Prevention, Mitigation, Response, and Rehabilitation). In the absence of a plan, the underlying cause of such incidents cannot be diagnosed, hindering in the adoption of effective prevention and mitigation measures.

3.12 No Meeting held by Provincial Disaster Management Commission

Section 14 of NDMA Act 2010 provides that subject to the provisions of this Act, a Provincial Commission shall have the responsibility for laying down policies and plans for Disaster Management in the Province.

PDMA works under the umbrella of PDMC. NDMA Act provides powers and functions of PDMC which includes: -

- i. Lay down the Provincial Disaster Management policy;
- ii. Approve DM plans
- iii. Review the implementation of the plan
- iv. Oversee the provision of funds for mitigation and preparedness measures
- v. Review development plans of the different departments.

The composition of PDMC as per NDM Act 2010 is as follows:

1. Chief Minister (Chairperson).

⁴<http://www.satp.org/satporgtp/countries/pakistan/balochistan/index.html>

2. Leader of Opposition.
3. One member of Provincial Assembly to be nominated by Chief Minister (Vice Chairman).
4. One member of Provincial Assembly to be nominated by Leader of Opposition.

During the course of study, it was observed that despite the crucial importance and oversight role of all DM activities performed in the province, to date no meeting of PDMC has yet been convened. Resultantly PDMA is handicapped in performing its functions at an optimum level. The decision of commission regarding approval of Provincial Disaster Risk Management Plan, establishment of PDMF and establishment of Balochistan Institute of Disaster Management are still pending.

3.13 Rescue -1122 organizational setup for immediate rescue, treatment and caring of victims

Asian Development Bank guidelines for disaster management provides that response measures are usually those which are taken immediately prior to and following disaster impact. Such measures are mainly directed toward saving lives and protecting property, and dealing with the immediate disruption, damage, and other effects caused by the disaster. Typical measures include implementing plans, activating the counter-disaster system, search and rescue, providing emergency food, shelter, medical assistance, surveying and assessing and evacuating.

Response operations usually have to be carried out under disruptive and sometimes traumatic conditions. Often, they are difficult to implement and they tend to make heavy demands on personnel, equipment, and other resources. Thus, without a sound basis of planning, organization, and training, response operations are unlikely to achieve optimum success.

For a rapid and effective response, there needs to be a system for activating disaster management officials and resource organizations.

In the province of Punjab, a complete setup as a department called Rescue-1122 has been organized. The rescue-1122 organization is mandated for immediate search, rescue and relief activities for any disaster or emergency situation. It has been experienced that after the launch of

this organizational setup in Punjab, this has become very successful and saved many precious lives. The setup is fully equipped with all type of logistics and trained staff. It has extended its services to the whole of Punjab at each tehsil level.

During a study on the man-made disaster, it has been observed that PDMA launched a pilot project of Rescue-1122 amounting to Rs 240 million in the Quetta (capital of Balochistan). The project was funded by World Bank, it was started on 25.01.2016 and closed on 12.02.2018. After the closure of the pilot project, a response team consisting of only 07 members was retained by PDMA on contract basis.

This state shows lack of planning and willingness of PDMA Balochistan to sustain the pilot project of Rescue 1122. The management showed indolent approach toward the success of pilot project and its further replication. The current team available with PDMA is quite insufficient besides lacking technical equipment and trained staff. It is required that Rescue 1122 should be established on the same pattern as in Punjab. Besides, civil defense setup may also be strengthened at the district level in the province.

3.14 Lack of human resource capacity at DDMA level

During the study, it was observed that the Provincial Government established DDMA in each district of Balochistan but till 2018 no dedicated staff for DDMA has been recruited and posted in districts.

There are no recruitment rules, job description and organogram for the DDMA as a result DDMA is a subordinate organization under the Deputy Commissioner working with minimum staff. There is dire need to establish a separate hierarchy for DDMA to work independently to carry out disaster management cycle as a regular activity.

The district authorities are managing the work of DDMA and only focusing on natural calamities especially during monsoon season, thus having least or even no priority towards man-made disasters at the district level. The current Disaster management setup at district level needs to be highly skilled and equipped with specialized personnel as to handle professionally this highly prone disaster risk areas.

3.15 Non-updation of District Plans and Tehsil & UC Committees office as planned in District Risk Management Plan

Section 21 of NDMA Act 2010 provides that there shall be a plan for disaster management for every district of the province and the district plan shall be reviewed and updated annually. Further, ADB guideline provides that plans must be reviewed and revised as necessary so that they are fully updated.

DDMP includes the vulnerability of different parts of the provinces to different forms of disasters and measures required to be adopted for prevention and mitigation. Moreover, capacity building and preparedness measures to be taken along with the roles and responsibilities of different government departments are also lacking.

During the course of study, it was observed that DDMP for seven districts of Balochistan (Gawadar, Jhalmagsi, Kachhi, Lesbela, Nasirabad, Quetta & Ziarat) were prepared in 2008, whereas district plans for remaining districts have not yet been prepared. Despite lapse of 10 years, the DDMPs have not been revised as required. Therefore, the authority is not improvising and incorporating new challenges in the DDMP. Further, the national DRM framework clearly lowers tiers of government as the frontline of DRM “where disaster activities are actually implemented”. For many line departments, the lower level of administration is where they interface directly with communities. Therefore, it was planned in DDMPs that Union and Tehsil level committees will be formed.

3.16 Non-existence of the District Emergency Operations Centre (DEOC)

NDRP provides that DEOC will serve as the hub for receiving early warning and issuing information to the public at the village level, taking measures to evacuate people, updating relevant departments, response agencies, and media etc.

The DEOC will also lead coordination and management of relief operations in affected areas in the district. All concerned departments and agencies and other humanitarian agencies will be coordinated by the

DEOC at the district level. The DEOC will function throughout the year in disaster and non-disaster times.

During a disaster, the DEOC will be disseminating early warning information, carry out relief coordination and focus on early recovery. In normal times, the emphasis will be on emergency preparedness and contingency planning in the district. The DEOC will be located at DCO Office, in the district headquarters equipped with all available communication facilities. The fourth priority of Sendai Framework is to invest in disaster management. One dollar invested can save the loss of ten dollars.

During the course of study, it was observed that no DEOC exist at DDMA level in the province of Balochistan. This is the operational center to observe the disaster and coordinate with another department for timely activities. In the absence of DEOC, no organization can actively supervise the relief and rescue activities during the disaster.

Moreover, there are no resources available at the disposal of DDMA. Since the inception of DDMA, no resources have been allocated to the DDMA for better management and preparedness of disaster besides periodic funds allocation for the monsoon. There is scarcity of human, financial and logistic resource.

3.17 No training and general awareness at the district level

Section 20(2)(i)(j) of NDMA Act states that DDMA may organize and coordinate specialized training programs for different levels of officers, employees and voluntary rescue workers in the district and facilitate community training and awareness programs for prevention of disaster or mitigation with the support of local authorities, governmental and non-government organizations.

Training of staff at the organization level is part of the capacity building which is key to disaster management. Moreover, it's also important to increase community awareness towards the disaster risk and their probable impact. If people know, how to react in an event of a disaster the loss caused by the disaster can be minimized.

During the course of study, it was observed that the DDMA (Quetta & Gwadar) did not make any effort to conduct disaster management training for the officers, employees and voluntary rescue workers in the district. Moreover, no activity of community training and awareness programs has since been initiated by authorities. The lack of awareness in general public may be the main cause of heavy loss (live and economic) in during disasters.

3.18 Nonproduction of record regarding disaster management

During the course of study, a questionnaire and requisitions were served upon for the provision of record but no record or answer to the questionnaire was provided to the team from DDMA Quetta. In the absence of record of DDMA Quetta, the team was unable to analyze actual situation of data and record of the working of the organization.

3.19 No SOPs defined in an event of Disaster

During the course of study, it was noticed that there are no defined SOPs dealing with the occurrence of disasters. The SOPs are standard procedures to be done in an event of a disaster. The SOPs once devised in an extensive form may help to manage disasters in future.

There is no procedure in the DDMA to be adopted if any disaster strikes. The lack of procedure leads to haphazard management of disaster and may also consume excessive and scarce resources. Therefore, it is needed that SOPs, to be adopted during a disaster, may be drafted and followed in future.

3.20 Lack of integrated approach toward disaster management

DDMA has the mandate to manage the disaster at the district level. To make full use of the experiences gained from the previous activities there is a need for exchange of views and experiences, data and information sharing, and working together to develop approaches and methods to address pertinent disaster-related issues.

During the course of study, it has been noticed that there was no integrated approach adopted by DDMA. There are different line departments at the district level having their own historical knowledge.

Before the existence of DDMA, the disaster was managed by different departments. This lack of coordination among various departments leads to ineffective disaster management resulting into financial and human loss.

4 Conclusion

The study was conducted to study various components of manmade disasters in various areas of Balochistan province and to prepare a report on the quality of the working of PDMA and district disaster management authorities besides making recommendations with a view to reduce the risks and impact of future disasters. Disaster management is the term often used to describe the systematic process of using administrative decisions, organizational assets and operational skills and capacities of the society and communities to implement policies and strategies to lessen the impact of man-made hazards and related environmental or technological disasters. Thus, disaster management encompasses disaster preparedness through preventive and mitigating measures, emergency response, including relief and early rehabilitation measures, and post-disaster rehabilitation and reconstruction.

The disaster Management organizations at all levels (National, Provincial and District) focus only on natural disasters. Keeping in view the past history of Balochistan, it is evident that the province is more prone to man-made disasters especially in the aftermath of terrorism. The study concluded that the disaster management at Provincial and District level requires special attention.

5 Recommendations

5.1 Recommendations for organization

As a result of the study, the recommendations for the organization are as under: -

- a. PDMA Balochistan may update Provincial Disaster Management Plan after incorporating the man-made disasters besides natural disasters and get it approved from PDMC and implement the said plan in letter and spirit.

- b. A detailed risk assessment and contingency plan may be prepared to deal with man-made disasters specifically and effectively in the province.
- c. Disaster Risk Management Fund may be established to bear the bill of disasters.
- d. PDMA may conduct a study to analyze the causes which are instigating different sectarian and civil unrest incidents and in light of this study propose preventive measures.
- e. Strong liaison/coordination may be established with relevant government departments.
- f. Specific allocation of funds may be made for training / relief activities dealing with man-made disasters.
- g. PEOC at PDMA Balochistan needs special attention in terms of resources (Human & Logistics) as it plays a crucial role during a disaster for coordination.
- h. Detail database / observations need to be maintained at PDMA of all the disaster for analysis and decision making for future purposes.
- i. The response force as mandated by NDMA Act may be established on a permanent basis as part of PDMA staff.
- j. Test plans should be checked regularly and revised accordingly in the scenario of new emerging threats.
- k. PDMA Balochistan may prepare a plan for civil unrest in complete coordination with Police, Paramilitary and Armed Forces to detect and cut down the roots of civil unrest.
- l. PDMA Balochistan may take serious steps to arrange PDMC which is the ultimate body / approving authority of all disaster Management activities in the province.
- m. A complete organizational setup of rescue-1122 Balochistan may be established at Tehsil level. It should be fully equipped with logistics and trained staff and be in line with the set-up of Punjab.

- n. All plans need regular revision taking into consideration changing the environment to fulfill the changing needs of the District, Tehsil or Union council respectively.
- o. DEOC at district level needs to be established immediately with sufficient resources (Human & Logistics) as it plays a crucial role during a disaster for coordination.
- p. DDMA may take different initiatives to create general awareness among the general public and arrange different pieces of training.
- q. SOPs may be devised for a structured response to disasters and avoiding unnecessary delays.
- r. Integration among different departments at district level needs to be enhanced for better results

5.2 Recommendations for policy makers

The recommendations for the policymakers are as under: -

- a. PDMA Balochistan should take steps to draft Provincial Disaster Management Act and get it approved from Balochistan Assembly.
- b. Regular meeting of Provincial Disaster Management Commission may be called to exhibit strong commitment by policymakers towards managing disasters in the province.
- c. Immediate hiring of trained staff at District level along with other resources and relevant support for better response and risk reduction measures.

REFERENCES AND SOURCES

Consultations and meetings:

- PDMA Officials
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References and Reports:

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