



**SPECIAL STUDY ON – “ARE
THE DISASTER MANAGEMENT
AGENCIES GEARING-UP TOWARDS
ACHIEVEMENT OF SUSTAINABLE DEVELOPMENT GOALS”
Audit Year 2016-17**

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ACRONYMS AND ABBREVIATIONS

ADB	–	Asian Development Bank
AJ&K	–	Azad Jammu and Kashmir
Coord	–	Coordination
DMAs	–	Disaster Management Authorities
DDMA	–	District Disaster Management Authority
DDMP	–	District Disaster Management Plan
DDMC	–	District Disaster Management Commission
DEOC	–	District Emergency Operation Centre
DG	–	Director General
DMIS	–	Disaster Management Information System
DNA	–	Damage and Needs Assessment
DRR	–	Disaster Risk Reduction
DRM	–	Disaster Risk Management
EWS	–	Early Warning Systems
EQs	–	Earthquakes
F&A	–	Finance and Administration
GLOF	–	Glacial Lake Outburst Flood
HFA	–	Hyogo Framework for Action
Hyd	–	Hyderabad
ISSAIs	–	International Standards of Supreme Audit Institutions
KP	–	Khyber Pakhtunkhwa
MDG	–	Millennium Development Goals
MHVA	–	Multi Hazard Vulnerability Assessment
MoU	–	Memorandum of Understanding
M&E	–	Monitoring and Evaluation
NDMA	–	National Disaster Management Authority
NDM Act	–	National Disaster Management Act in 2010
NDMC	–	National Disaster Management Commission
NDMO	–	National Disaster Management Ordinance 2006
NDRMF	–	National Disaster Risk Management Framework
NDMP	–	National Disaster Management Plan
NDRP	–	National Disaster Response Plan
NDRF	–	National Disaster Response Force
NGOs	–	Non-Government Organizations
Ops	–	Operations

PDA	–	Post Disaster Assessments
PDMA	–	Provincial Disaster Management Authority
PDMCs	–	Provincial Disaster Management Commissions
PDMP	–	Provincial Disaster Management Plan
PDNA	–	Post Disaster Needs Assessment
PEOC	–	Provincial Emergency Operation Centre
PMD	–	Pakistan Meteorological Department
PSDP	–	Public Sector Development Project
SDGs	–	Sustainable Development Goals
SOPs	–	Standard Operating Procedures
Suk	–	Sukkur
UN	–	United Nation
UNDP	–	United Nation Development Program
WB	–	World Bank

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The team expresses its gratitude to the Management and staff of National, Provincial and District Disaster Management Authorities for the assistance and cooperation extended during the execution of this assignment.

PREFACE

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

The Directorate General Audit, Disaster Management, conducted a special study on "Are the disaster management agencies gearing-up towards achievement of sustainable development goals". The scope of the study is limited to assess the efficiency of coordination mechanism between different disaster management agencies and to draw comparison with Sendai Framework. The Special Study indicates shortcomings, specific actions, and recommendations that will help the management to achieve the objectives of disaster management in Pakistan.

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

Dated:
Pakistan

Javaid Jehangir
Auditor General of

EXECUTIVE SUMMARY

The Director General Audit, Disaster Management conducted special study on “Are the disaster management agencies gearing-up towards achievement of Sustainable Development Goals (SDGs)”. Out of 17 SDGs, Goal 13 is partially linked with disaster management. The disaster management organization at National, Provincial and District levels can achieve SDGs through coordination among different departments. Therefore, this study is focused on coordination mechanism among disaster management organizations and draw comparison. This study emphasizes on preparedness of various organizations as envisaged in SDGs. Further, it emphasis on assessment of internal controls, National, Provincial and District Emergency Operation Centers, roles & responsibilities during pre-disaster/preparedness phase, measuring the Disaster Risk Reduction (DRR) and suggest possible remedial measures/recommendations.

Natural disasters cannot be stopped but one can arm it selves with knowledge: so many lives wouldn't have been lost if there was enough disaster preparedness.¹

The 2005 earthquake and 2010 & 2011 floods have revealed the vulnerability of Pakistani society and economy to disasters. Damages and losses have been massive but could have been largely reduced if disaster risk reduction measures had been incorporated into physical, social and economic development. The 2005 earthquake illustrated the fact that disasters are not only natural but also man-made and are closely related to human knowledge, skills and action or inaction. The 2005 earthquake was a wake-up call to move away from an emergency response paradigm, and to devote more attention to prevention, mitigation and preparedness.

The Global Climate Risk Index 2014 ranks Pakistan the third worst-affected country in 2012. There is compelling evidence that risks facing the society continue to be reshaped due to emerging hazards coupled with uncertainty of climate change and persisting development failures.²

This study relates mainly to the assessment of the coordination mechanism between related organizations specially in an event of disaster and also in the context of preparedness. The activities and responses from the management were analyzed during the course of study, and the following issues of potential significance were observed:

¹<https://www.brainyquote.com/quotes/quotes/p/petranemco426837.html>

²http://www.pk.undp.org/content/pakistan/en/home/operations/projects/crisis_prevention_and_recovery/disaster-risk-reduction.html

- a. Non-adherence to SDGs at National, Provincial and District level.
- b. Lack of coordination between NDMA, PDMA and DDMA's after Devolution of Disaster Management Function
- c. Non conducting of provincial/ district vulnerability assessment surveys
- d. Non-preparation of hazard specific contingency plans
- e. Non conducting of Post Disaster Assessments (PDA) for knowledge sharing & lessons learned.
- f. Weak operational capabilities at PEOC and DEOC
- g. Weak early warning systems
- h. Non development of Disaster Management Information System
- i. Lack of coordination between NDMA, PDMA and DDMA's
- j. Lack of Stock Management System and database.
- k. Lack of training and awareness
- l. Lack of capacity building of staff at DDMA level.

The results of this study indicate shortcomings and it has been noted that there is continuous need for improvement in the areas of risk assessment being starting point of disaster management followed by hazard mapping at all levels to gauge the vulnerabilities of different demo-graphs. There is need to focus on structural works in flood management. Hazard specific contingency planning may be done at all levels. An effective and efficient early warning system may be devised and implemented. Detailed evacuation plans of vulnerable population may also be chalked out. These specific actions, if taken, will help the management to achieve the objectives underlined in the SDGs.

1 Introduction

The Sustainable Development Goals (SDGs), popularly known as the Global Goals, are a universal call for action to end poverty, protect the planet and ensure that all people enjoy peace and prosperity. These seventeen goals build on the successes of the Millennium Development Goals (MDGs). These goals are interconnected so as the key to success on one goal will involve tackling issues more commonly associated with another. Goal 13; Climate Action of SDGs partially addresses the Disaster Management related issues.

Disaster means a catastrophe or a calamity in an affected area, arising from natural or man-made causes or by accident which results in a substantial loss of life or human suffering or damage to, and destruction of property. Earthquakes, landslides, floods, droughts, hurricanes and volcanic eruptions can be classified as naturally occurring hazards. Without proper risk reduction, mitigation and adaptation methods, these natural hazards can turn into catastrophic disasters.

Pakistan is a large country with around 881,913 Square Kilometer area (including AJK & Baltistan) and population of over 207 million people. It is a country with great topographical and climatic contrasts. It has all kinds of topographical features from coastal beaches, sandy deserts, plateaus, fertile plains, high mountains, snow covered peaks and glaciers. One of the largest river systems i.e. river Indus runs through the length of Pakistan. Therefore, it is prone to a number of hazards such as floods, earthquakes (EQs), droughts, glacial lake outburst flood (GLOF), landslides, and cyclones etc.

In the context of Pakistan, floods, cyclones, drought and transport accidents and incidents of terrorism are significant hazards in terms of frequency and their impact upon human lives, livelihoods, and infrastructure. Climate change leads to an increase in the frequency and intensity of hydro-meteorological hazards while EQs have a comparatively longer cycle, yet they have a huge impact on human lives, infrastructure, housing, livelihood, etc. Therefore, EQs are considered one of the most lethal hazards.

Vulnerability describes the economic, social and environmental/physical conditions that make a community susceptible to hazards resulting in potential disasters. Generally, vulnerability can be related to factors such as poverty, gender, weak governance, under-developed institutions, poor access to services, the absence/erosion of risk transfer mechanisms and social safety nets, environmental degradation, rapid urbanization, illiteracy and low levels of education.

1.1 Study Defined

All communities are vulnerable to disasters, both natural and man-made. Our country is highly prone to both types of disasters. Recurrent floods and flash floods have resulted in many deaths, damaged standing crops, left many more homeless, killed hundreds of livestock, caused riverbank cuttings, surface runoff, soil erosion, avalanches, and landslides, damaged houses, roads and infrastructure to the tune of billions of rupees. Also, the man-made disasters are damaging the country in terms of human and financial loss.

Investment in DRR and preparedness saves lives and mitigates suffering. It is a significant and effective use of resources than paying the bill for disaster response. World Bank and International Federation of Red Cross have found that for each dollar invested in DRR, two to ten dollars are saved in avoiding or reducing disaster response and recovery costs³.

In order to reduce disaster damage, there must be a close combination of three types of measures: "self-help efforts" rooted in the awareness of people and corporations, "mutual-help efforts" of community-based Organizations and NGOs, and "public-help efforts" made by national, provincial and local governments. These three types of measures are essential in all stages of the disaster management cycle.

The main cause of such heavy losses and damages is lack of preparedness, planning, and the country's limited institutional and organizational capacity for disaster management. To cope with such natural and manmade disasters, it is important to strengthen institutional and organizational capacity, provide for robust preparedness and responses planning, clarify the roles and responsibilities of different stakeholders, and put in place coordination mechanisms for emergency preparedness-EWS.

Keeping in view the importance of the audit of preparedness and pre-disaster phase of hazards related to disaster management, and achievements of disaster management agencies towards SDGs, this assignment was approved by Auditor General of Pakistan in the Audit Plan 2016-17 office of Director General (Disaster Management).

The SDGs, are successors of Millennium Development Goals (MDGs). There are seventeen SDGs that include some new areas not covered in MDGs such as

³ www.ifrc.org/Global/global-alliance-reduction.pdf

climate change, economic inequality, innovation, sustainable consumption, peace and justice.

The SDGs work in the spirit of partnership and pragmatism to make the right choices now to improve life, in a sustainable way, for posterity. They provide clear guidelines and targets for all countries to adopt in accordance with their own priorities and the environmental challenges. The SDGs are an inclusive agenda. They tackle the root causes of poverty and unite us together to make a positive change for both people and planet.

This study relates mainly to the assessment of coordination mechanism between NDMA, PDMA and DDMA at all levels of disaster management process. For this purpose, PDMA Sindh and GBMDA were selected on sample basis with the view of distant demography.

1.2 Purpose of Study

The overall objective of this study is to assess the coordination mechanism between NDMA, PDMA and DDMA at all levels of disaster management process as outlined in SDGs. Further the study focuses on the following:

- a. To assess the preparedness of the NDMA, PDMA and DDMA for disaster management as envisaged in Goal 13.
- b. To check the Disaster Risk Reduction (DRR) measures with Sendai Framework.
- c. To suggest possible remedial measures which can help the organization in achieving the SDGs.

1.3 Scope of Study

There is no specific SDG goal related to disaster management, however Goal 13 is partially linked with it. The disaster management organizations at National, Provincial and District level can achieve SDGs through coordination among different departments. For this purpose, following disasters were selected to check the coordination and draw comparison:

Organization	Disaster
PDMA Sindh	Flood 2010 & 2011
	Heat wave 2015
GBDMA	Land sliding leading to creation of Attaabad Lake 2010
	Earthquake, 2015

a. Responsible authorities

National Disaster Management Authority,
Provincial Disaster Management Authority, Sindh
District Disaster Management Authority, Hyderabad
District Disaster Management Authority, Sukkur

b. Source of Information

National Disaster Management Authority, Provincial Disaster Management Authority, Sindh, District Disaster Management Authorities Hyderabad and Sukkur Districts. Websites and publications like NDMA Act, NDMP, NDRP, DRR Sendai Framework, SDG Goals, Monsoon contingency plans, SOPs & PC-I etc.

c. Source of financing

Federal / Provincial Government, and donations

d. Limitations

The study with respect to GBDMA could not be initiated due to audit jurisdiction. Therefore, the report is concluded on the basis of record provided by NDMA, PDMA Sindh, DDMA Hyderabad and DDMA Sukkur. However, DDMAAs did not extend any cooperation in furnishing the record/data.

1.4 Study Design

a. Beneficiary of Study

The beneficiaries of this study will be Federal / Provincial Governments, NDMA, PDMA, DDMAAs and Pakistan Audit Department.

b. Time Period

The time period selected for the study ranged from 2010 to 2015. The preparedness and pre-disaster activities carried out by PDMA Sindh in the above mentioned period and previous projects/data has also been consulted for the subject study. The working days allocated for the study were 18.

c. Data

Most of the data for this study was qualitative in nature.

i. Primary Data

Primary data like policies and procedures, details of inventory available at PDMA & DDMA, equipment available at PEOC, details of job descriptions, sanctioned and working strength and vacancy position at PDMA has also been consulted/obtained during the course of the study.

ii. Secondary Data

The secondary data like NDMA Act, National Disaster Response Plan, National Disaster Management Plan, DRR Policy, Sendai Framework, SDGs, Monsoon Contingency Plans, Provincial Disaster Planning Guidelines, District Disaster Planning Guidelines as available at respective websites of NDMA and PDMA were consulted.

1.5 Methodology

The study was conducted by reviewing the files, records and documents, conducting interviews and floating questionnaire from management/staff of NDMA, PDMA and DDMA. The methodology adopted for obtaining data from the department is as under:

- a. Requisition for relevant record, files and documents from the department.
- b. Studying different booklets, contingency plans and national and provincial climate change policies.
- c. Analysis of targets achieved by disaster management organizations.
- d. Questionnaire were prepared to obtain replies from NDMA, PDMA and DDMA
- e. Interviews and discussions with Management
- f. Evaluation of replies, responses and information
- g. Interview with Assistant Directors of key sections of PDMA, Sindh
- h. Visit of PEOC, and different wings

1.6 Data Analysis

Main focus of analysis was of qualitative nature with a view to have knowledge sharing and lesson learnt for future. In order to analyze policies and procedures adopted by NDMA, PDMA and DDMA, the sample was selected to gauge the progress and improvement regarding disaster management in later years.

The results specific to SDGs, DRR and preparedness activities of the organization were derived/inferred from the data and information obtained as a result of the above methodology.

a. Questionnaire and Response

The interview questionnaire was developed during the course of the study keeping in view preparedness and response considerations in an event of a disaster (Annex-A). The replies and available data/record provided by PDMA were analyzed to understand the version of the PDMA regarding preparedness, mitigation and prevention of disasters, DRR and DRM activities.

Total, seventeen, twenty-four and thirty questions were floated to NDMA, PDMA and DDMA respectively. The percentage of departmental responses to the questionnaire were 0%, 100% and 0% respectively.

Chapter-I

Disasters Risks in Pakistan

1.1 Types of Disasters

a. Earthquake

Pakistan lies on a seismic belt and is therefore prone to earthquakes of smaller and larger magnitude. The following districts are more vulnerable to earthquakes: -

District	Province
Gwadar, Mastung, Quetta and Ziarat	Balochistan
Abbottabad, Battagram, Chitral, Mansehra, Peshawar, Shangla and Swat	Khyber Pakhtunkhwa
Karachi	Sindh
Rawalpindi	Punjab
Bagh, Neelum and Muzaffarabad	AJ & K
Astore	Gilgit-Baltistan
Islamabad	ICT

b. Floods

Pakistan is highly exposed to floods which occurred on a regular basis in the country. The following districts are vulnerable to floods and flash floods: -

District	Province
Bolan, Jhal Magsi, Kech, Khuzdar, Lasbella and Naseerabad	Balochistan
Charsada, Dera Ismail Khan, Nowshehra and Peshawar	Khyber Pakhtunkhwa
Badin, Dadu, Karachi, Kambar, Shahdadt, Naushehro Feroz, Sanghar, Thatta and Jamshoro	Sindh
Dera Ghazi Khan, Gujrat, Jhang, Bhakkar, Kasur, Lahore, Muzaffargarh, Rajanpur and Sialkot	Punjab
Bagh and Bhimber	AJ & K
Diamer	Gilgit-Baltistan
FATA	

c. Drought

Droughts are becoming increasingly common in Pakistan due to climate changes and reduced rains. The following districts are more prone to droughts.

District	Province
Chagai, Kharan, Khuzdar, Lasbella, Mastung, Quetta and Washuk	Balochistan
Badin, Dadu, Tharparkar, Thatta, Umerkot and Sanghar	Sindh
Bahawalpur, Dera Ghazi Khan, Mianwali, Bhakkar and Rajanpur	Punjab
FATA	

d. **Tropical Cyclones**

Cyclones have become frequent globally but most of them do not seriously impact Pakistan's coast. The following districts are vulnerable to tropical cyclone: -

District	Province
Gawader, Ketch, Lasbella and Washuk	Balochistan
Badin, Karachi, and Thatta	Sindh

e. **Glacial Lake Outburst Floods & Avalanches: -**

Astore, Gilgit and Ghanche Districts are vulnerable to GLOFs, similarly Kashmir region experience avalanches on seasonal basis.

f. **Landslides**

Landslides are basically the rapid mass movements of land. Landslides can be triggered by an earthquake, rainstorm, wind or anthropogenic activities e.g. blasting. The following districts are vulnerable to landslides: -

District	Province
Kaghan, Naran and Chitral	Khyber Pakhtunkhwa
Bagh, Bhimber, Neelum and Muzaffarabad	AJ & K
Astore, Diamer, Gilgit and Ghanche	Gilgit-Baltistan

g. **Civil Conflicts / Terrorism**

There are different ethnic, linguistic, religious and sectarian groups living in the country thus leaving room for potential threats of violence. Civil violence has an impact on local population and causes loss to human lives, property and creates insecurity for different social and marginal groups in the affected areas. Similarly, the military operation against terrorists in various parts of the country has resulted into loss of infrastructure thus causing financial burden on the government. The death toll in Pakistan is over 63000⁴

h. **Urban Fires**

For the last two decades, there has been a significant migration from rural to urban which has put a lot of pressure on the urban areas of Pakistan thereby creating more slum areas in the cities. Unplanned CNG filling stations and unauthorized LPG gas stores are quite common. Further, the sale of petroleum products in the residential areas and transportation of petroleum products pose major fire related risks.

⁴<http://www.satp.org/satporgrp/countries/pakistan/database/casualties.htm>

i. **Transport Accidents**

Transport accidents, particularly road accidents, are common in Pakistan. The major reasons for this are poor road conditions, two-way traffic, and unsafe driving practices. Some big accidents have also been reported on railways in Pakistan. Pakistan rank 67 globally for a higher percentage of road traffic accidents⁵. WHO predicted that road accidents were claiming 30,310 lives in Pakistan annually.

j. **Industrial Accidents**

Industrial cities are prone to industrial disasters. The chemical industry faces the potential threat of disasters because of possible chemical explosions. The following districts are vulnerable to industrial accidents: -

District	Province
Hub	Balochistan
Peshawar and Gadoon Amazai	Khyber Pakhtunkhwa
Karachi and Hyderabad	Sindh
Faisalabad, Gujrat, Gujranwala, Lahore, Multan and Sialkot	Punjab

1.2 Vulnerabilities in Pakistan

The vulnerabilities in different regions of the country for various hazards are absolutely distinct. The main reasons are poor quality of housing/infrastructure and non-adherence to the building codes thus making these buildings vulnerable to EQs. KPK, FATA and Kashmir are mountainous areas with poor road infrastructure. Further, lack of implementation of civic laws has also contributed towards the vulnerability of these communities.

In the flood plains, communities living near riverbeds are suffering due to many factors including resistance to leave the Kacha areas, deforestation, poor maintenance of embankments, inefficient EWS & its dissemination, river erosion, sub-standard housing construction, lack of preparedness, poor communication and inferior road infrastructure.

In drought-prone areas vulnerability increases because of changes in land patterns, reduction of the communal grazing land, increase in livestock population, overgrazing, deforestation, skeletal infrastructure, lack of EWS, weak institutions and lack of communication facilities in the areas.

⁵<http://www.pakistaneconomist.com/2017/11/13/alarming-road-accidents-rate-pakistan-rules-laws-need-overhaul/>

In Balochistan, extensive installation of tube wells has depleted groundwater resources. The coastal belt of Pakistan is highly vulnerable to cyclones and storm surges, particularly the Sindh coastal belt, which is more vulnerable because it is in a low-lying region. As a result, cyclone travels some distance inland with resultant pounding in some areas. This causes damage to standing crops and converts agricultural land to swamp and saline land, rendering it into non cultivable land.

In addition, tropical cyclones, storm surges and strong winds can destroy human settlements, damage electrical and communication installations and damage seasonal crops. Climate change has increased the frequency and intensity of cyclones and storm surges. The changes in tracks of storms have impacted the socio-economic development of the area.

Mountainous communities in the northern areas are characterized by remoteness, isolation, harsh climatic conditions and scattered population with very few or no communication facilities. Their vulnerability is further compounded by deforestation, which leads to frequent soil erosion and landslides. About one third of the population lives in poverty and poorest people live in hazard-prone areas. Their capacity to fight against disasters is almost nonexistent. Since disaster risk reduction is not their priority, they suffer the most in the event of disasters.

1.3 Purpose of Organizations (NDMA, PDMA & DDMA)

After the devastating EQ of October 08, 2005 the Government of Pakistan has established the Earthquake Reconstruction and Rehabilitation Authority (ERRA) on October 24, 2005 to take up the mammoth task of rehabilitation and reconstruction in the earthquake affected regions of Khyber Pakhtunkhwa (KP) and Azad Jammu & Kashmir (AJ&K). The authority established only deals with the rehabilitation and reconstruction for the affectees of October 8, 2005 EQ. Therefore, this exhibited the need for establishment of organization dealing with policy and institutional arrangements to reduce losses from disasters in future.

The need for strong institutional and policy arrangements was fulfilled with the promulgation of National Disaster Management Ordinance, 2006, enacted by the parliament in 2010. The objective of the act was to provide for an effective national disaster management system.

The National Disaster Risk Management Framework (NDRMF) has been formulated in March 2007 to guide the work of entire system in the area of Disaster Risk Management (DRM). It has been developed through wide consultation with stakeholders at local, provincial and national levels. The Framework identifies

National Strategies and Policies for disaster management. Nine priority areas have been identified within this framework to establish and strengthen policies, institutions and capacities over the next five years: These include: -

- i. Institutional and legal arrangements for DRM
- ii. Hazard and vulnerability assessment.
- iii. Training, education and awareness.
- iv. DRM planning.
- v. Community and local level programming.
- vi. Multi-hazard early warning system.
- vii. Mainstreaming disaster risk reduction into development.
- viii. Emergency response system, and
- ix. Capacity development for post disaster recovery.

There are following lead organizations/authorities to deal with disaster at all federal/provincial levels:

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 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, NGOs, Governmental Ministries and Departments).

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 in any province. PDMA 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 initial and subsequent assessment of disaster affected areas, and determine the course of action to ensure long-term rehabilitation of the affected population. The strength of PDMA Sindh is 35.

c. District Disaster Management Authority (DDMA)

The DDMA, under the District Disaster Management Commission (DDMC), is involved in executing DRR program at the district and tehsil level (second-lowest tier of local government).

d. Pakistan Army

The Pakistan Army's Corps of Engineers have the responsibility of providing assistance to civil authorities by operating rescue and relief operations during national disasters. It is involved in all phases of flood mitigation from pre, during and post floods. During the pre-flood preparatory phase, the Commander, Corps of Engineers make regular inspections of flood protection structures. During floods the Corps of Engineers monitor the flood situation and provide regular situational updates, forecasts and warnings to the designated Director General (DG) and all other Commanders, Corps of Engineers. Units of the Army are deployed to target areas to carry out rescue and relief operations. It is the responsibility of the PDMAs to provide army with equipment during disasters such as boats, life-jackets, tents and vehicles.

1.4 Act, Rules and Regulations governing Organization and SDG Framework

In 2006, the National Disaster Management Ordinance (NDMO) 2006 was introduced by the Government of Pakistan to provide a legal framework for DRR at a federal, provincial and district level and included nine priority areas from the Hyogo Framework for Action. In 2010 the framework was enacted under the NDM Act 2010. Under the act, the NDMC had been established under the Chairmanship of the Prime Minister as the highest policy making body for disaster management in the country. As an executive/implementing arm of the NDMC, the NDMA had been established to coordinate and monitor implementation of national policies and strategies on disaster management. PDMAs and DDMA's are also established at the provincial and district level respectively.

Further, pursuant to the Amendment XVIII (the Eighteenth Amendment) in the Constitution of Pakistan under which the provinces have been given autonomy.

The new system envisages a devolved and de-centralized mechanism for disaster management. Accordingly, Provincial Disaster Management Commissions (PDMCs) and Authorities (PDMAs) have been established while similar arrangements have been made in AJ&K and Northern Areas. The DDMA's have been notified across the country. The DDMA's are the linchpin and play the role of the first line of defense in the event of a disaster.

a. Sendai Framework (2015-2030)

The Sendai Framework for DRR 2015-2030 was adopted at the Third United Nations (UN) World Conference in Sendai, Japan, on March 18, 2015. It is the outcome of stakeholder consultations initiated in March 2012 and inter-governmental negotiations from July 2014 to March 2015, supported by the UNs Office for DRR at the request of the UN General Assembly.

The Sendai Framework is the successor instrument to the Hyogo Framework for Action (HFA) 2005-2015: Building the Resilience of Nations and Communities to Disasters. The HFA was conceived to give further impetus to the global work under the International Framework for Action for the International Decade for Natural Disaster Reduction of 1989, and the Yokohama Strategy for a Safer World, adopted in 1994 and the International Strategy for Disaster Reduction of 1999.

There are four priority areas of Sendai Framework:

- a. Understanding disaster risk
- b. Strengthening disaster risk governance to manage disaster risk
- c. Investing in disaster risk reduction for resilience
- d. Enhancing disaster preparedness for effective response and to “Build Back Better” in recovery, rehabilitation and reconstruction.

b. Sustainable Development Goals (SDG)

The SDGs, otherwise known as the Global Goals, are a universal call for action to end poverty, protect the planet and ensure that all people enjoy peace and prosperity. There are seventeen goals as listed below:

- i. GOAL 1: No Poverty
- ii. GOAL 2: Zero Hunger
- iii. GOAL 3: Good Health and Well-being
- iv. GOAL 4: Quality Education
- v. GOAL 5: Gender Equality
- vi. GOAL 6: Clean Water and Sanitation
- vii. GOAL 7: Affordable and Clean Energy
- viii. GOAL 8: Decent Work and Economic Growth
- ix. GOAL 9: Industry, Innovation and Infrastructure
- x. GOAL 10: Reduced Inequality
- xi. GOAL 11: Sustainable Cities and Communities
- xii. GOAL 12: Responsible Consumption and Production

- xiii. GOAL 13: Climate Action
- xiv. GOAL 14: Life Below Water
- xv. GOAL 15: Life on Land
- xvi. GOAL 16: Peace and Justice Strong Institutions
- xvii. GOAL 17: Partnerships to achieve the Goal

These 17 Goals build on the successes of the Millennium Development Goals, while including new areas such as climate change, economic inequality, innovation, sustainable consumption, peace and justice, among other priorities. The goals are interconnected – often the key to success of one will involve tackling issues more commonly associated with another.

There is no specific SDG related to disaster management except two goals, which are partially linked with disaster management. These include GOAL 11 and GOAL 13. The disaster management organization at National, Provincial and District level can achieve SDGs relevant to them through coordination between them and other departments. That’s why the focus of this study is on coordination mechanism among disaster management organizations at National, Provincial and District levels (NDMA, PDMAs and DDMAs).

The SDGs work in the spirit of partnership and pragmatism, to make the right choices now to improve life, in a sustainable way for future generations. They provide clear guidelines and targets for all countries to adopt in accordance with their own priorities and the environmental challenges of the world at large. They tackle the root causes of poverty and unite us together to make a positive change for both people and planet. “Supporting the 2030 Agenda is a top priority for United Nation Development Program (UNDP),” said UNDP Administrator Helen Clark. “The SDGs provide us with a common plan and agenda to tackle some of the pressing challenges facing our world such as poverty, climate change and conflict. UNDP has the experience and expertise to drive progress and help support countries on the path to sustainable development.”⁶

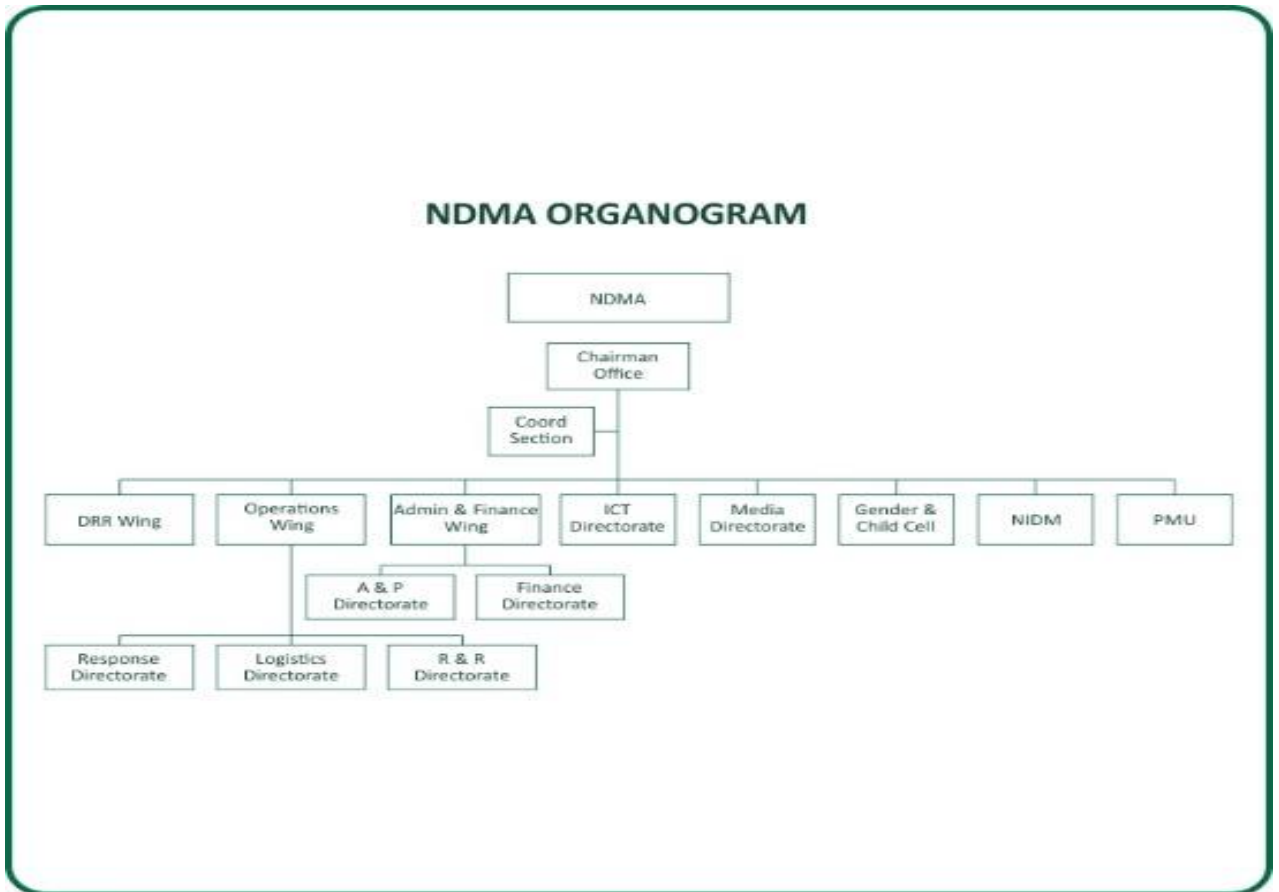
SDGs were launched on 10th October 2015 at National SDGs conference organized by Planning Commission of Pakistan and UNDP Pakistan. Federal Minister Planning, Development & Reform accompanied by Federal Minister for Food Security, Minister for Education and UN Resident Coordinator inaugurated the launching of SDGs in Pakistan.

⁶<http://www.undp.org/content/undp/en/home/sustainable-development-goals.html>

On this occasion, a Memorandum of Understanding (MoU) was also signed between Planning Commission of Pakistan and UN for implementation of SDGs in Pakistan. Federal Minister Planning, Development & Reform and UN Resident Coordinator signed MoU on behalf of Planning Commission and UN respectively.⁷

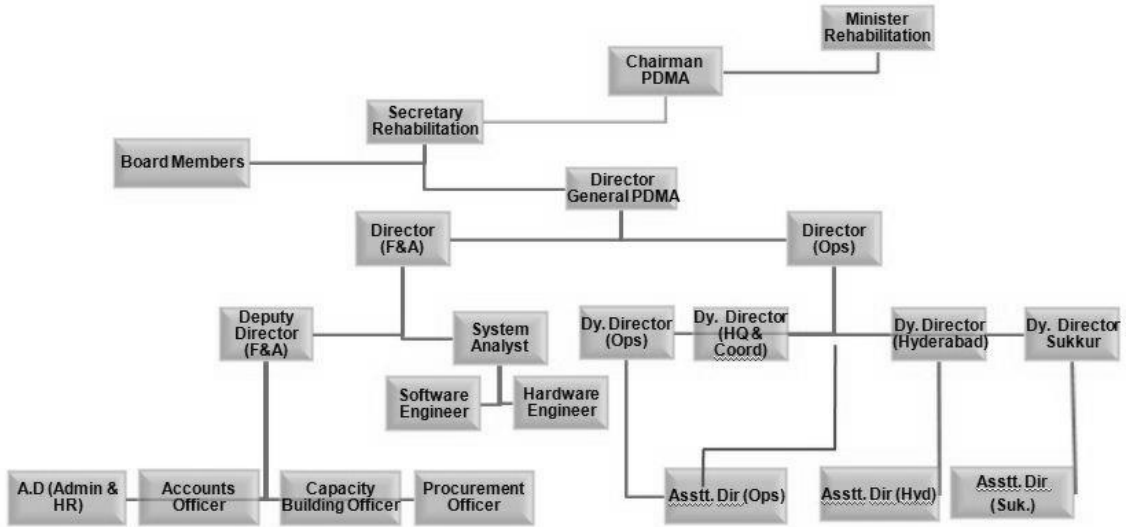
1.5 Layout of Organization

ORGANOGRAM OF NDMA



⁷<http://www.fpapak.org/news/v/sustainable-development-goals-sdgs-were-launched-in-pakistan-planning-commission-an-undp-signed-and-mou.html>

ORGANOGRAM OF PDMA, Sindh



Chapter-II

2 Special Study Results

2.1 Non-awareness of Sustainable Development Goals by the management of the disaster management organizations

SDGs were launched on 10th October 2015 at National SDGs conference organized by Planning Commission of Pakistan and UNDP Pakistan. Federal Minister Planning Development & Reform, Federal Minister for Food Security, Minister for Education and UN Resident Coordinator inaugurated the launching of SDGs in Pakistan and signed a MoU between Planning Commission of Pakistan and UN for implementation of SDGs in Pakistan. Federal Minister Planning, Development & Reform and UN Resident Coordinator signed MoU.

There are seventeen goals of SDGs covering major areas such as climate change, economic inequality, innovation, sustainable consumption, peace and justice.

The SDGs work in the spirit of partnership and pragmatism to make the right choices now to improve life, in a sustainable way, for future generations. They provide clear guidelines and targets for all countries to adopt in accordance with their own priorities and the environmental challenges. The SDGs are an inclusive agenda. They tackle the root causes of poverty and unite us together to make a positive change for both people and planet.

The managements of these organizations were unaware of SDGs. It was stated at all levels of Disaster Management that no policy level guidelines have been provided by Federal, Provincial or District governments. Therefore, no progress has been made in this regard.

2.2 Devolution of Disaster Management Function

The target of Sustainable Development Goal 13 provides that climate change measures may be integrated into national policies, strategies and planning.

After the promulgation of the 18th Amendment, the bulk of responsibilities – in both DRR and response – were vested with the provinces. The DRR related powers between the national, provincial and district Disaster Management Authorities (DMAs) would follow the financial devolution that already existed for public sector development program. In terms of response, the primary responsibility lay with the provinces, with the NDMA taking care of facilitation, coordination, liaison and creating national policy.

It has been transpired that, the dearth of technical capacity and financial resources resulted in undue reliance on international relief organizations. The bulk of this technical assistance continues to be concentrated at the national level, perpetuating technical and resource gaps between the provincial DMAs and the NDMA.

The approach adopted by PDMA is not two ways (with NDMA) and lack rationality, as in an event of disaster PDMA look towards the NDMA for resources (Financial, Human, Technical). The core function of NDMA is to facilitate and create policy, guidelines and directives for climate change, DRR and response, which is being done at NDMA level but the enforcement of such policy, guidelines and directives is the discretion of PDMA and other line departments.

However, after the devolution there is no control of NDMA over PDMA and DDMA regarding implementation of rules, guidelines, policies and plan prepared at NDMA level. It is merely at the discretion of these organizations to follow the rules, guidelines, policies and plan approved by NDMA to be followed or not.

2.3 Non-existence of Disaster Management Information System (DMIS)

The target of Sustainable Development Goal 13 provides that education, awareness-raising and human and institutional capacity may be improved on climate change mitigation, adaptation, impact reduction and early warning.

“Information is what information does”. Utility of any information is its timely dissemination to the right persons. Information plays an important role in empowering the personnel involved in disaster management at various levels. Relevant proactive information can go a long way in handling such situations and in preparing to meet the same. Information need takes different dimensions in different situations. The information needs of disaster managers fall into three categories of activities Pre-disaster activities, During disaster, Post-disaster activities.

DMIS is a computer database for disaster response that provides graphical, real-time information to respondents. DMIS enables disaster management organization to make their required activities in any phase of an emergency in an easy and speedy way.

Key components of a Disaster Management Information System would be a database of

- a. Hazard Assessment Mapping
- b. Vulnerability Assessment

- c. Demographic Distribution
- d. Infrastructure, Lifelines and Critical Facilities
- e. Logistics and Transportation Routes
- f. Human and Material Response Resources
- g. Communication Facilities
- e. Stock management

During the course of study, it was observed that no Disaster management information system exists at national, provincial and districts level. The main purpose of this system is to integrate the disaster activities at all level. NDMA being the main disaster management agency in the country needs to develop DMIS. Developing an efficient DMIS is an important stage in planning for disaster preparedness. Pakistan is prone to diverse disasters ranging from GLOF to Tsunami from North to South region. It is need of the time to develop state of the art DIMS to cater disasters in a more scientific way.

2.4 Non-existence of Early Warning System

The target of Sustainable Development Goal 13 provides that education, awareness-raising and human and institutional capacity may be improved on climate change mitigation, adaptation, impact reduction and early warning.

Achieving the SDGs and building a safer world in the 21st century is only possible when the world more effectively reduces damages caused by natural calamities.

Early warning plays such a significant role in improving human security because it is one of the most effective measures for reducing negative impacts of threats and risks triggered by natural disastrous events. Early warning and other mitigation interventions are a cost effective way of DRR. Effective EWS not only save lives but also help protect livelihoods national development gains.

Effective EWS must focus on people centered and must integrate four elements; (i) a knowledge of the risks faced; (ii) a technical monitoring and warning service; (iii) the dissemination of meaningful warnings to those at risk; and (iv) public awareness and preparedness to face disasters. Failure in any one of these elements can mean failure of the whole EWS.

EWS technologies are now available for almost all types of hazards and are in operation at least in some parts of the world.

The DRR Policy 2013 emphasizes on the fact that Pakistan experiences a range of regularly occurring hazards which provides a strong rationale for investing in

multi-hazard EWS that provide advance warnings to both decision-makers and communities. Effective EWS depend upon risk knowledge, an effective hazard monitoring and threat assessment, warning system, dissemination and communication of warning messages and communities that respond to warnings. Ultimately EWS are only as good as the life-, livelihood- and property-saving action that they manage to induce. EWS therefore require to give attention to people centered and employ gender sensitive approaches in establishing warning and dissemination mechanisms.

It was observed during the study that there is no EWS in place for disasters in Pakistan, specially flood forecasting system because floods are not new phenomena to Pakistan. Moreover, no steps were taken by NDMA to devise and setup EWS for natural disasters in Pakistan at all levels. NDMA along with PDMAs may collaborate with Pakistan Metrological Department (PMD) to take proactive initiative for better disaster preparedness.

2.5 Implementation of National Disaster Management Plan (NDMP)

The target of Sustainable Development Goal 13 provides that mechanisms for raising capacity for effective climate change-related planning and management in least developed countries may be promoted, specifically focusing on women, youth, local and marginalized communities.

NDMA prepared NDMP in June, 2012. The plan aimed at enhancing the capacity of the country to prepare for and respond to disasters by defining the measures to be considered necessary for disaster management and risk reduction in line with the provision of the NDM Act.

The plan was formulated with a vision to achieve sustainable social, economic and environmental development in Pakistan through reducing disaster risks and vulnerabilities. The NDMP envisaged ten (10) disaster management techniques to establish an efficient and effective disaster management system in Pakistan through forty-one (41) strategies and one hundred eighteen (118) proposed priority actions/programs. The time frame for implementation of above interventions, over the next ten years (2012-2022). The shortcomings identified are listed in Annex-B.

The above referred table shows that the NDMA was unable to achieve the targets articulated in NDMP despite spending huge resources.

2.6 Non adherence to guidelines for disaster management - Sendai Framework

The Sendai Framework is the successor instrument to the HFA2005-2015: Building the Resilience of Nations and Communities to Disasters. The Sendai Framework is built on elements which ensure continuity with the work done by States and other stakeholders under the HFA and introduces a number of innovations as called for during the consultations and negotiations.

The Sendai Framework for DRR 2015-2030 was adopted by countries to adopt a concise, focused, forward-looking and action-oriented post 2015 framework for DRR. Seven global targets have been agreed to support the assessment of global progress in achieving the outcome and goal of the present Framework. These targets will be measured at the global level and will be complemented by work to develop appropriate indicators. National targets and indicators will contribute to the achievement of the outcome and goal of the present Framework.

Four priorities listed below were identified for achieving DRR.

Priority 1: Understanding disaster risk.

Priority 2: Strengthening disaster risk governance to manage disaster risk.

Priority 3: Investing in DRR for resilience.

Priority 4: Enhancing disaster preparedness for effective response and to “Build Back Better” in recovery, rehabilitation and reconstruction

The study shows that NDMA is still not putting up full efforts towards the DRR framework. NDMP and DRR policy 2013 was formulated by NDMA regarding DRR in Pakistan but the same were not implemented in letter and spirit. The priorities in said framework corresponds to certain activities e.g. Priority 1 is directly associated with Multi Hazard Vulnerability Assessment (MHVA), Priority 2 is associated with Legislation, Priority 3 is associated with budget allocations and Priority 4 is linked with policies, plans and capacity.

2.7 In ability of NDMA to provide Technical Assistance to PDMAs and DDMAAs

The target of Sustainable Development Goal 13 provides that resilience and adaptive capacity may be strengthened to climate-related hazards and natural disasters. Further, Section 9 (e) of NDM Act states that NDMA shall provide necessary technical assistance to the Provincial Governments and the Provincial

Authorities for preparing their disaster management plans in accordance with the guidelines laid down by the National Commission.

During the course of study, it has been observed that no necessary technical assistance is being provided at Provincial level. NDMA is only focusing on periodic meetings/conferences by inviting provincial disaster management agencies. NDMA has prepared different plans and policies regarding DRR and DRM for implementation at national, provincial and district level. For this purpose, technical assistance was required by NDMA towards PDMA and DDMA for their capacity building and implementation.

2.8 Non-conduct of Multi Hazard Vulnerability Assessment

The target of Sustainable Development Goal 13 provides that climate change measures may be integrated into national policies, strategies and planning. Further, intervention 5 of NDMP provides that NDMA is responsible organization in association with PDMA for conducting detailed Multi-Hazard vulnerability and risk analysis/assessment at national level.

Assessment of risk considering both the probability of occurrence of a natural phenomenon and its consequences on the elements at risk is an essential step before the design of adequate risk reduction strategies in national, provincial and local level. Pakistan is prone to different forms of disasters.

MHVRA activity is the first step towards scientific approach of Disaster Management. This enables the organization to point out the possible disasters that may have impact on certain area. The priority 1 of Sendai Framework also focuses on understanding the disaster risk. In the absence of MHVRA DRR and management procedures cannot be prepared and implemented.

During the course of study, it was observed that NDMA has only conducted partial survey during the pilot phase of NDMP after that no efforts were made to initiate and conduct the MHVRA at national level to assess the disasters and their impact and prepare remedial measures for better preparedness.

Further, PDMA, Sindh and DDMA have not conducted vulnerability survey of the province and district respectively. Disaster management process starts with preparedness and without complete mapping of disaster prone areas of Pakistan and especially Sindh disaster preparedness is not possible.

2.9 Nonexistence of Disaster Response Force

The target of Sustainable Development Goal 13 provides that education, awareness-raising and human and institutional capacity may be improved on climate change mitigation, adaptation, impact reduction and early warning. Further, Section 27 (1) of NDM Act states that there shall be established a National Disaster Response Force (NDRF) for the purpose of specialist response to a threatening disaster situation or disaster.

During the course of study, it is observed that there is no such force established to deal with disaster as mandated in NDM act. Further, since promulgation of Act no efforts has been made to create such response force. Moreover, no feasibility study was initiated or conducted regarding the manner and the conditions of service of the member of the force.

The disaster management is not possible without trained human resource. In an event of disaster there is dire need of trained relief and rescue teams to help affectees. Contrary to above NDMA has not taken any initiative toward establishment of Disaster Response Force. In the absence of such trained force, NDMA is relying on Pakistan army in the event of disasters.

2.10 Inverse pyramid of staff

The target of Sustainable Development Goal 13 provides that education, awareness-raising and human and institutional capacity may be improved on climate change mitigation, adaptation, impact reduction and early warning.

The main function of NDMA/PDMA is coordination, monitoring and implementation of plan and policies at national level/provincial level while DDMA is the front line department to implement field activities. The review of sanctioned strength revealed that there was more managerial staff at NDMA as compared to PDMA and no staff at DDMA level (Sukkur & Hyderabad). This situation results into inefficient relief activities. Thus Disaster Management set up in Pakistan is like an Inverse Pyramid Organization having more management than field workers.

2.11 Non preparedness on Manmade disasters

Section 2 (b) of NDMA Act 2010 defines “disaster” as a catastrophe or a calamity in an affected area arising from natural or man-made causes or by accident which results in a substantial loss of life or human suffering or damage to and destruction of property.

Disasters can take many different forms, and the duration can range from an hourly disruption to days or weeks of ongoing destruction. All types of disasters i.e. natural, man-made or technological have impact on community. Apart from Natural Calamity, disasters also can be caused by humans. Man-made disasters include Hazardous material, Power service disruption & black out, Nuclear power plant and nuclear blast, Radiological emergencies, Chemical threat and biological weapons, Cyber-attacks, Explosion, Workplace fires, Civil unrest etc.

Pakistan is prone to different disaster especially when we focus on man-made disasters;

- Hazardous materials emergencies including chemical spills
- Workplace fires which can cause significant property damage and loss of life
- Explosions and civil unrest
- Threats by extremist groups
- Road side accidents.
- Air Plane crashes

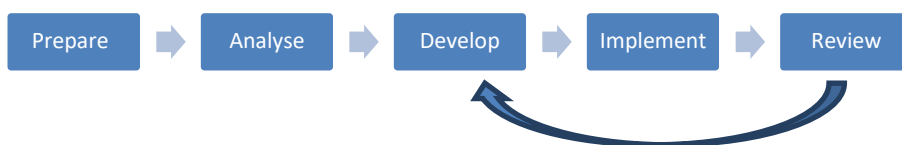
During the course of study, it has been observed that NDMA is only catering natural disasters against a vast scope of covering both Natural and Man-made disaster. This left the area of man-made disaster unattended at national level.

2.12 Non preparation of Hazard Specific Contingency Plan

The target of Sustainable Development Goal 13 provides that climate change measures may be integrated into national policies, strategies and planning.

A contingency plan is a backup plan, activated in the event of a disaster. Contingency planning aims to respond well to an emergency and its potential humanitarian impact. Developing a contingency plan involves making decisions in advance about the management of human and financial resources, coordination and communication procedures, and being aware of a range of technical and logistical responses. The contingency planning is a management tool, involving all sectors, which can help ensure timely and effective provision of humanitarian aid to those most in need when a disaster occurs. Time spent in contingency planning equals time saved when a disaster occurs. Effective contingency planning should lead to timely and effective disaster-relief operations.

Flow chart of contingency planning is given below:



The hazard specific contingency plan outlines the actions of the Provincial Government that will be taken in support of local governments when an extreme temperature event is anticipated or has occurred. The plan also provides guidance for local governments and non-governmental organizations in the preparation of their heat emergency response plans and other related activities.

The plan contains specific actions to be taken by department and different stake holders. The record analysis of PDMA Sindh regarding Heatwave 2015 show, that no coordination mechanism with line departments was in place. Also, there is no data available regarding the capacities of respective key line departments in the event of disaster. Further, after a lapse of two years still no contingency plan regarding heat wave has been prepared or process for preparation has been initiated. In case of same disaster there is no workable plan available with the authority.

The core function of PDMA, Sindh is disaster management. An effective contingency plan is first step of preparedness for disaster management.

2.13 Non Integration of Disaster Risk Reduction in Development Projects

The target of Sustainable Development Goal 13 provides that climate change measures may be integrated into national policies, strategies and planning.

The integration of DRR into Public Sector Development Projects is important for effective preparedness. Currently DRR integration is at its initial stage. This applies to all levels of development planning i.e. a) national development plans and poverty reduction strategy papers; b) development programs and sector-specific projects and c) the application of building codes for construction and land-use and zoning regulations for settlement planning. This can be attributed to a mix of both technical and institutional factors; namely the need to raise awareness and commitment at policy- and decision-making levels; the need to build dedicated capacity and resources; a lack of institutional and legal mechanisms to promote enforcement; and a lack of monitoring, evaluation and accountability.

NDMA being the main disaster management organization at national level has the responsibility to take up the matter at Government level to integrate Disaster

Risk Reduction into development projects. The proforma may be devised by NDMA to be part of PC-I catering the aspects of Disaster Risk Reduction and Environment Assessment of the PSDP projects.

The planning department may be approached to play its role for mandatory integration of DRR in PSDP. As a consequence, development increase disaster risks instead of reducing.

2.14 No revision of provincial plan despite lapse of 8 years and non-preparation of DDMP

The target of Sustainable Development Goal 13 provides that climate change measures may be integrated into national policies, strategies and planning. Further, section 17 (1) of NDM Act 2010 states that there shall be a plan for disaster management for every Province to be called as the Provincial Disaster Management Plan (PDMP). Further, section 3(4) of act states that the Provincial Plan shall be reviewed and updated annually.

PDMP includes 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 roles and responsibilities of different government departments and at district level it is the responsibility of DDMPs.

During the course of study, it was observed that PDMA Sindh prepared PDMP in the year 2008. Despite lapse of 9 years the PDMP was not revised as required. Therefore, the authority did not improve PDMP by incorporating new challenges. Further DDMPs are not preparing District Disaster Management Plan (DDMP).

District plan is overall document of district to cover disaster prone areas of district and outline disaster mitigation strategies. It also lists down the other departments, their respective roles and responsibilities in an event of disaster. Absence of district plan shows lack of focus on disaster management.

District plan may need to be prepared besides being reviewed and updated annually.

2.15 Non preparation of any SOPs for coordination with line Department

The target of Sustainable Development Goal 13 provides that climate change measures may be integrated into national policies, strategies and planning. Further, according to section 16(2)(f) of NDM Act, 2010 the Provincial Authority may, co-

ordinate response in the event of disaster. Further, the DRM Plan Sindh also focuses on the SOP of different line departments.

During the analysis of record regarding Heat wave it is revealed that no coordination was made with different line departments except activation of PEOC. The key stake holder in this event were Health Department, Home Department, K-Electric and local government etc. Further, Karachi is an industrial city and the worker performed their duties in industries in high temperature. No mechanism / SOPs was prepared to evaluate the firms either providing a healthy atmosphere to the workers and to safeguard the workers in case of heat wave incidence.

The key to better disaster management is effective coordination among all the key players involved in an event of disaster.

2.16 No post disaster assessment with reference to Heat Wave for Knowledge sharing and lesson learned

The target of Sustainable Development Goal 13 provides that education, awareness-raising and human and institutional capacity may be improved on climate change mitigation, adaptation, impact reduction and early warning.

For an effective disaster management, it is the need of time to conduct post disaster assessment at the conclusion of an event. There is a need to assess how the emergency response has been conducted throughout the disaster and to identify ways to improve in future. This activity leads to lesson learned from previous disaster and knowledge sharing with other disaster management agencies and line departments. As discussed earlier review of contingency planning after implementation is key aspect towards better planning for future disasters. The new concept in this regard is Post Disaster Needs Assessment (PDNA).

PDNA is a government-led exercise that estimates post-disaster damage and losses across all sectors of the economy as well as the recovery, relief, reconstruction, and risk management needs. PDNA also provides guidance to the government and international donor community on the country's short, medium, and long term recovery priorities. It focuses on the analysis of disaster impact to be conducted in different sectors by sector experts. Sector wise analysis is integrated at one place to ascertain the cumulative impact of a disaster. It largely focuses on the infrastructure losses, roads, communication, power and public building.

PDNA output may be used for multiple purposes in relation to recovery and reconstruction efforts in a particular context. This exercise helps to address the

drawbacks and flaws in existing system (problems of coordination and communication, resource requirement (financial & Stock), which can be rectified in future. The key items of post disaster assessment include but not limited to:

- Identify Problems During the Event
- Examine Those Problems and Characterize Them
- Make Suggestions on How to Correct Those Problems in the Future
- Implement These Changes in Policy and Preparedness Plans

It is observed that PDMA, Sindh has not conducted any post disaster need assessment with regards to heat wave and flash floods. This deprived PDMA to overcome its deficiencies and prepare comprehensive contingency plan in the light of PDNA.

2.17 Lack of integrated approach in flood management

The target of Sustainable Development Goal 13 provides that climate change measures may be integrated into national policies, strategies and planning.

Enough hard work is required to address these concerns from both national and regional perspectives. The regional (province) approach is of particular significance as activities undertaken in one region may affect, positively or negatively, the extent of floods in the other regions, particularly the downstream ones.

There is pressing need for exchange of views and experiences, data and information sharing, and working together to develop approaches and methods to address pertinent flood management issues, national and regionally (province), to make full use of the experiences gained from the flood management activities.

During the analysis of data regarding flood 2015 it is noticed that there was no integrated approach by PDMA Sindh with provincial line departments. , because onset time of flood is long and it took time to reach the Sindh province. Further, the key stake holder in flood is irrigation department but no coordination mechanism between PDMA Sindh and irrigation department exists for integrated flood management. This lack of coordination among other PDMAs leads to financial and human losses.

2.18 Inability to conduct Damage and Need assessment by Provincial or Local authorities

The target of Sustainable Development Goal 13 provides that mechanisms for raising capacity for effective climate change-related planning and management in

least developed countries may be promoted, specifically focusing on women, youth and local and marginalized communities.

In the wake of the floods, the Government of Pakistan requested Asian Development Bank (ADB) and World Bank (WB) to lead the Damage and Needs Assessment (DNA). The DNA process assesses the extent of the damage and the required needs for rehabilitation and reconstruction of the damaged assets and infrastructure; and restoration of livelihoods and economic productivity. DNA provides the strategic underpinnings for medium- to long-term post floods reconstruction, recovery planning, prioritization, and programming. There are three categories to assess the damage:

- Direct Damage
- Indirect Losses
- Reconstruction Costs

During the analysis of record, it is noticed that no damage and need assessment was done by PDMA Sindh in the wake of flood 2010. Further, floods are recurring disaster in the province of Sindh and no assessment was carried out to date. Since the establishment of PDMA no exercise regarding capacity building of leading disaster management organization of the province has been carried out.

2.19 No staff and Capacity building of disaster management agencies

The target of Sustainable Development Goal 13 provides that education, awareness-raising and human and institutional capacity may be improved on climate change mitigation, adaptation, impact reduction and early warning.

During the study it was observed that staff was not appointed by Provincial Government Sindh in DDMA. The Provincial Government establish DDMA in each district of Sindh in September 2007. Until 2017 no dedicated staff for DDMA is being recruited and posted in districts.

The district authorities are not managing the work of DDMA on priority basis. The district administration is only emphasizing on flood / rain activities during monsoon season. National Disaster Response Plan (NDRP) provides the detail of staff required at DDMA is given below: -

Sr. No	Designation	Grade
1.	Coordinator DEOC	18
2.	Administrative, Logistics and Security Office	16/17
3.	Public Relation Officer	16/17

Disaster management needs highly skilled and specialized personnel to work in this fast changing era.

Moreover, the existing DRM capacity is not perceived to be high and has been negatively impacted by staff turnovers and shortages. Analysis shows that continual staff turnover and the system of staff transfer within the government is highly detrimental for DRM capacity. Although policies state that staff should stay in post for a “reasonable” period, political interference means that they are sometimes transferred after very short periods.

The DRM offices should be subjected to very strict staff transfer procedures as organizational relationships and institutional memory could play a critical role in reducing loss of life from a disaster. There is a general lack of resources and DRM capacity at the provincial levels, having no specialized DRM personnel in PDMA.

2.20 Lack of focus on structure flood disaster management

The target of Sustainable Development Goal 13 provides that climate change measures may be integrated into national policies, strategies and planning.

Floods are almost a recurring phenomenon in the monsoon season in the areas lying along the rivers and their basins in Pakistan. There are two flood management strategies:

- Structural measures
- Non-structural measures

Structural measures include constructions of embankments, spurs, dikes dispersion, delay action dams, bypass structures, forestation and channelization of flood waters.

The non-structural measures aim at improving flood forecasting system through effective data collection and dissemination system, real time rain fall and river flow data collection, weather radar prediction, modern system of transmission of flood forecasts and improved early flood warning system including based on effective flood forecasts, early flood warning is issued, reliable interaction between all related flood control and relief agencies and timely warning and evacuation arrangements by provincial relief departments and district administrations.

On analysis of disaster management setup, it is noticed that PDMA Sindh since its inception is always focused on non-structural measures and trying hard to coordinate and develop expertise to devise mitigation strategy. This approach is short to medium term, thus ignoring the long term disaster preparedness aspect.

2.21 Non compilation of information regarding infrastructure and resources of line departments to be used in case of emergency

The target of Sustainable Development Goal 13 provides that mechanisms for raising capacity for effective climate change-related planning and management in least developed countries may be promoted, specifically focusing on women, youth and local and marginalized communities.

Disaster management needs a scientific approach with integrated efforts to mitigate and reduce risk. The disaster management is not possible without collaboration of different stakeholders and information about their resources to be utilized in an event of disaster.

PDMA Sindh supposed to have complete information regarding infrastructure of the province along with detail of resources available with different line department.

The analysis of data regarding flood 2010 shows that PDMA, Sindh has no information regarding knowledge of infrastructure and resources available with different departments i.e. Civil Defense, Irrigation, Police, Army etc. was maintained by PDMA.

2.22 Absence of Post Disaster Research to develop precautionary relief measures

The target of Sustainable Development Goal 13 provides that mechanisms for raising capacity for effective climate change-related planning and management in least developed countries may be promoted, specifically focusing on women, youth and local and marginalized communities.

After flood waters subside and response efforts are substantially completed, the recovery process begins. Citizens need to understand how to safely reenter their homes. Business and residents may also need to know how to safely rebuild. Damages must be documented for insurance purposes, grants, or other assistance applications. A coordinated effort to accomplish these and other post flood damage assessment and data collection activities is outlined in a post-flood damage assessment protocol and a post-flood data collection protocol.

Flood impacts are typically classified using two criteria. The first criterion distinguishes between tangible and intangible impacts. Tangible impacts are those that can be readily quantified in monetary terms. These include the damage to property. This is contrasted with intangible impacts, which cannot be readily quantified in monetary terms. This include loss of life, the negative impact on the

mental well-being, and impacts on the environment, such as the loss of recreational facilities, loss to environments, and contamination.

A post-flood damage assessment gives the community a defined plan to make sure community requirements are met with and damage is properly assessed. Also, a post-flood data collection provides a way to take advantage of the opportunity to gather data that will improve the tools for evaluating future flood risks and possible alternatives to reduce those risks. Contrary to this, no post disaster assessment regarding floods was conducted by PDMA.

2.23 No epidemic control strategy during natural disaster.

The target of Sustainable Development Goal 13 provides that climate change measures may be integrated into national policies, strategies and planning.

Outbreaks of infectious diseases followed by natural disasters are very common. Epidemics may be the consequence of disasters. Most post-disaster diseases are caused by poor sanitation, lack of safe drinking water and contaminated food. There are many health related issues affecting communities after disasters. The possible outbreak of epidemics caused by rotting animal carcasses, rotten leaves, tree trunks and unhygienic environment is very disturbing.

The risk for outbreaks is often presumed to be very high in the chaos that follows natural disasters. The risk factors for outbreaks after disasters are associated primarily with population displacement. The availability of safe water and sanitation facilities, the degree of crowding, the underlying health status of the population, and the availability of healthcare services all interact within the context of the local disease ecology to influence the risk for communicable diseases and death in the affected population.

During the course of study, it has been observed that PDMA, Sindh have not devised epidemic control strategy. In case of floods the water is contaminated which may lead to different epidemic diseases like Cholera, Typhoid Fever, Dysentery, Hepatitis, Malaria, Dengue fever etc. Post effect of a disaster may lead to an epidemic. For mitigation and preparedness that the authority may equip itself by preparing an epidemic control strategy.

2.24 No construction recommendation in the flood affected areas

The target of Sustainable Development Goal 13 provides that climate change measures may be integrated into national policies, strategies and planning.

PDMA is the leading organization in a province to manage and take measure for better preparedness against different disasters. During the course of study, it has been observed that PDMA did not take any initiative for construction in the flood affected areas. There are two main types of flood mitigation strategies i.e Structural and Non Structural. Despite the fact that the disaster management organization across Pakistan a focus on Non Structural measure.

PDMA Sindh may recommend after taking deliberations, studies, post-disaster assessment and on the basis of past experience that what type of construction is suitable in the flood affected areas for rehabilitation and reconstruction. This part of disaster management is long forgotten as provincial agency has limited scope to deal with relief and rescue.

2.25 No maintenance of activity log of PEOC during flood 2010 for future

The target of Sustainable Development Goal 13 provides that mechanisms for raising capacity for effective climate change-related planning and management in least developed countries may be promoted, specifically focusing on women, youth and local and marginalized communities.

The National Disaster Response Plan 2010 focuses on establishment of PEOC along with its objectives and functioning in pre-disaster and during disaster.

During the study the process of PEOC was demanded but limited record was presented by PDMA Sindh regarding activating the PEOC during Flood and Heat Wave. Moreover, the activity log was demanded but the same was not provided.

In the absence of activity log, one cannot assess the effectiveness of PEOC in post disaster scenario. It is very important to maintain activity log in an event of disaster for record and future.

2.26 No study regarding climate change and Global Warning

The target of Sustainable Development Goal 13 provides that education, awareness-raising and human and institutional capacity may be improved on climate change mitigation, adaptation, impact reduction and early warning.

PDMA Sindh has not yet conducted any study regarding climate change in the province. Heat Stoke in recent times in the province is main example of climate change in the region which directly effects the people.

The key step towards proactive approach of disaster mitigation and management is to assess the risk and its impact. Currently, global warming is a main

player towards changing climatic conditions and adversely affecting the world. Pakistan is also affected by excessive change in climate. Heat wave in Karachi is a result of drastic climatic change. It is the prerequisite of better preparedness that initiatives may be taken up by PDMA to study the climatic change and its affects.

2.27 No implementation status on National Policy and Provincial Policy

The target of Sustainable Development Goal 13 provides that mechanisms for raising capacity for effective climate change-related planning and management in least developed countries may be promoted, specifically focusing on women, youth and local and marginalized communities. Further, the section 16 (2) (a) of NDM Act states that PDMA may formulate the provincial disaster management policy duly approved by the Provincial Commission.

The PDMA Sindh failed to devise a policy as mandated by NDMA Act, as PDMA is following the National Policy. The DRR Policy 2013 provides an overall framework for addressing the high levels of disaster risk in the country. The policy focuses on promoting priority measures to existing vulnerabilities to hazards, and equally important measures to ensure future development processes and programs strengthen resilience.

The PDMA Sindh has to develop provincial policy covering the principles, objectives, interventions and implementation for natural and man-made disasters which may occur in Sindh.

2.28 No coordination among disaster management agencies

The target of Sustainable Development Goal 13 provides that climate change measures may be integrated into national policies, strategies and planning.

During the course of study, it was observed that disaster management agencies at provincial and district level lacks coordination vertically and horizontally among departments. Further, there are different line departments having their own historical knowledge. Before the existence of disaster management agencies, the disaster was managed by different departments.

PDMA is completely unaware of the activities performed by DDMA. The disaster management subject in Pakistan is managed through NDMA, PDMA and DDMA which are supposed to be coordinating with each other. Moreover, there are not standard procedures to be adopted in case of disasters. The lack of procedure leads to haphazard management of disaster and may also consume excessive scarce resources.

2.29 Only Focus on Flood (Monsoon Contingency Plan)

The target of Sustainable Development Goal 13 provides that resilience and adaptive capacity may be strengthened to climate-related hazards and natural disasters.

During the course of study, it was observed that the DDMA (Hyderabad and Sukkur) are only focusing on flood management. The district authorities are active in the monsoon season and preparing Monsoon Contingency Plan. Although Flood is main cause of disaster in Pakistan but it is not rational to leave other disasters unattended.

DDMA is the only disaster management organization at district level to manage all types of disaster i.e Natural and Man-made disasters, whereas, the resources of DDMA are only utilized during the monsoon period.

2.30 No trainings and general awareness at district level

The target of Sustainable Development Goal 13 provides that education, awareness-raising and human and institutional capacity may be improved on climate change mitigation, adaptation, impact reduction and early warning. Further, section 20(2)(i)(j) of NDM Act states that DDMA may organize and co-ordinate 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 organization level is part of capacity building which is key to disaster management. Moreover, it is also important to increase community awareness towards the disaster risk and their probable impact. If people know, how to react in an event of disaster the loss caused by the disaster can be minimized.

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

2.31 Nonexistence of District Emergency Operations Centre (DEOC)

The target of Sustainable Development Goal 13 provides that resilience and adaptive capacity may be strengthened to climate-related hazards and natural disasters.

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

The DEOC will also lead coordination and management of relief operations in affected areas in the district. All concerned departments, agencies and other humanitarian agencies will be coordinated by the DEOC at district level. The DEOC will function throughout the year in disaster and non-disaster times.

During 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.

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

2.32 Non production of record regarding disaster management

During the course of study questionnaire and requisitions were served for record but no record or answer to the questionnaire was provided to the team. In the absence of record of DDMAAs the team was unable to analyze the situation with the data and record of organization.

2.33 No resources available for disaster management at district level

The target of Sustainable Development Goal 13 provides that education, awareness-raising and human and institutional capacity may be improved on climate change mitigation, adaptation, impact reduction and early warning.

During the course of study, it was observed the there are no resources available at the disposal of DDMAAs. The provincial government created the DDMAAs

in 2007 and since then no resources have been allocated to the DDMAAs for better management and preparedness of disaster at district level.

The resource is scarce in shape of human, logistics, inventory and financial. The NDMA Act 2010 emphasis to maintain a strategic reserve/stockpile for any kind of disaster. Non establishment of stockpiles of disaster relief items for emergency situation creates problems in finding a suitable supplier with the least financial cost and better quality of goods during emergency situation. Moreover, non-maintaining of necessary stockpiles may cause delay in provision of relief items to the affectees. Investment in disaster management is ranked as fourth priority in Sendai Framework i.e investing one dollar can save up to ten dollars.

3 Recommendations

3.1 Recommendations for organization

In view of the results of the study, the recommendations for the organization are as under: -

- a. Resilience and adaptive capacity related to climate-related hazards and natural disasters needs to be strengthened at all levels i.e. National, Provincial and District level.
- b. Measures to compete climate change be integrated into national policies, strategies and planning at all levels i.e. National, Provincial and District level to achieve sustainability.
- c. Education, awareness-raising and human and institutional capacity needs to be improved on climate change mitigation, adaptation, impact reduction and early warning at all levels i.e. National, Provincial and District level.
- d. Capacity for effective climate change-related planning may be raised.
- e. Prevention is better than cure; organization should be empowered with information at the pre-disaster, during disaster and post-disaster level for disaster preparedness. DMIS empowers the organization to manage disaster in a proactive approach.
- f. NDMP 2012 is required to be implemented in letter and spirit. The document covers the span of 10 years with different intervention and strategies which are required to be implement according to timelines.

- g. Pakistan adopted the Sendai Framework 2015-2030 and now it's the responsibility of disaster management organizations to implement the framework to achieve its goals.
- h. Disaster includes both types of disasters i.e. Natural and Man-made. The man-made disasters also need attention, currently disaster management organizations are only emphasizing on natural calamities.
- i. Post Disaster Assessments are critical for effective reconstruction and recovery planning. An assessment should document the extent, nature and implication of damage that occurred as a result of disaster, outline the investments that are required to repair or replace damaged or lost assets, restore access to services and determine the significance of economic losses.
- j. PDMA's may increase their capabilities to conduct assessment and studies. Because major post disaster assessments were conducted by international agencies such as ADB and WB.
- k. Non-structural strategy is always being followed for flood management by National, Provincial and District authorities. It is the time that disaster management agencies should focus on structural strategy which includes constructions of embankments, spurs, dikes dispersion, delay action dams, bypass structures, forestation and channelization of flood waters.
- l. PDMA's should have database of resources available with different line departments i.e. Rescue services, Civil Defense, Army, District Administration etc which can be utilized immediate during any disaster.
- m. PDMA's may recommend the construction in different areas with reference to structural strategy for flood management.
- n. PDMA's may conduct climate change studies especially in Sindh province with reference to Heat Wave.
- o. DDMA's are required to prepare their district plan which serves as key document for disaster management.
- p. MHVA survey should be conducted at district level for understanding of disaster prone areas vulnerable to specific disaster and their impact.
- q. Coordination mechanism at district level needs to be strengthened with different line departments.

- r. SOPs may be devised for structured response to disasters and avoiding unnecessary delays.

3.2 Recommendations for policy makers

The recommendations for the policy makers are as under: -

- a. It is recommended that special attention may be given to implementation of SDGs. Targets of Goal 13 needs distinctive focus. These can only be achieved with an integrated approach. The importance of these goals need understanding. A step forward is needed by giving guidelines to disaster management organization in context of Goal 13 Climate Action.
- b. Disaster Management is a devolved subject therefore, the legal framework in this context needs to be devised. After the 18th amendment disaster management is a provincial subject but the provincial authorities are still working under the legal framework of National Disaster Management Act. The provincial authorities are manipulating this loophole which need to be addressed.
- c. DRR needs to be integrated at Federal and Provincial Government. All the public sector development projects should be designed after taking into consideration DRR.
- d. National Disaster Management Plan should be implemented by all the PDMAs. This requires a unified dissemination of information by planning commission with clear cut targets to be achieved in line with the SDGs to all the provinces.
- e. Immediately staff may be hired at District level along with resources and other relevant support for better response and risk reduction measures because main frontline departments needs to be strengthened.

4 Conclusion

The study was conducted with a view to assess the achievement of SDGs in the context of disaster management. The UN prepared SDGs were agreed by 193 member countries to gradually increase the sustainability of people and planet. These goals are interconnected and needs integrated approach to achieve the specific targets of each goal.

This study focuses on the coordination between Disaster Management origination at different Government Levels by taking sample disaster events. The

comparison was drawn after analyzing the existing mechanisms in place between organization during an event of disaster and their coordination among different departments.

The study concludes that the goal 13 of SDGs was neither adhered to at National nor Provincial and District level and the coordination mechanism among the disaster management authorities as well as line department requires improvement. Resilience, mitigation, adaptation, impact reduction, early warning and adaptive capacity related to natural disasters needs special attention. Further, climate change measure was required to be integrated into policies, strategies and planning at all Government Levels. Moreover, the institutional capacity needs to be improved at all levels to address natural disaster more efficiently and effectively. Therefore, a comprehensive policy needs to be formulated to implement the SDGs at all Government levels to attain the sustainability in development of people and planet.

Annex-A

- Question No. 1** Whether any SOP has been devised for declaring emergency who declared the emergency in the event of disaster?
- Response** Emergency was declared by Relief Commissioner Sindh under Calamity Act 1958.
- Question No. 2** Whether PEOC exists and operations, if yes provide copy of notification/order?
- Response** The PEOC made functional during emergencies and it was manned 24/7 by the officials. Even EOC at district levels were established during crises / emergencies.
- Question No. 3** Whether rapid assessment was carried out in the event of Heat Wave and Flood 2010, if yes provide copy of evidence?
- Response** As per practices rapid and careful assessment was carried out immediately after the disaster by the concerned departments of Government of Sindh
- Question No. 4** Whether coordination with relevant departments/stakeholders i.e. Civil Defense, Health, Armed Forces/NGOs etc during disasters was made for deployment of resources, if yes provide copy of evidence?
- Response** There was a strong coordination mechanism between concerned agencies and departments. During the event of disaster, the district administration used to request PDMA for deployment of the agencies as per requirement. Accordingly, as per understanding the deployment of the agencies were carried out
- Question No. 5** Whether coordination with NDMA was made during and after disaster if yes provide copy of evidence?
- Response** There was a close coordination with NDMA during disasters
- Question No. 6** Whether necessary support and guidance to the affected DDMA's were made in the event of disaster if yes provide copy of evidence?
- Response** Necessary full support and full guidance was provided to the affected DDMA's
- Question No. 7** Whether relief goods and logistic support to the affected areas were provided if yes provide copy of evidence?
- Response** Relief goods and logistic support was provided to the affected areas. Upon Receipt of the requests for assistance by the District

Administration, PDMA Provided the relief goods as well as logistic support

Question No. 8 Whether any specialized training sessions were organized for staff/volunteers if yes provide copy of evidence?

Response Various trainings / workshops are carried out in coordination with NGOs/INGOs. Furthermore, trainings for boat drivers as well as ambulance drivers carried out. The purpose of the boat driver training was to train the people from district administration who could be utilized during floods. The ambulance drivers of volunteers' ambulance service providers of Karachi were provided first aid training keeping in view the heat wave scenario

Question No. 9 Whether staff/volunteer/trained force deployed in the event of disaster if yes provide copy of evidence.

Response Volunteers and wardens are deployed in the event of disaster by DDMA's

Question No.10 Whether liaison with NGOS, INGOs, voluntary organization and civil society was made in the event of disaster if yes provide copy of evidence

Response Close liaison was maintained with NGOS and INGOs and NGOs were persuaded by PDMA to assist district administration keeping in view their expertise

Question No. 11 Whether staff recruited in accordance with qualification set for the post and proper training has been scheduled for the staff?

Response The staff was recruited in accordance with rules / policies

Question No. 12 Whether any awareness campaign has been carried out regarding risk existed?

Response Awareness campaigns are carried out time to time through print and electronic media. In addition to this, each year a disaster day is celebrated i.e 8th October. Furthermore, multiple NGOs in coordination with PDMA carry out awareness campaigns in shape of seminars, trainings and drills.

Question No. 13 Whether steps have taken for shifting the people from riskiest area, if yes provide documentary evidence

Response The population was evacuated from risky area to safer places. For example, after the breach in Tori bund treated was felt that the District Jacobabad might get inundated hence the free trains were

arranged to evacuate the people from Jacobabad city, similarly other risky areas were also evacuated

Question No. 14 Whether mandatory stock of food and non-food items and medicine were available?

Response Sufficient stock of food and non-food items was made available as per the requirement of the District Administration.

Question No. 15 Whether the stock available was in good condition and is useable?

Response The stock available was in good condition and usable. As the quality assurance was maintained.

Question No. 16 Whether any detailed plan for the resources required for relief operations prepared and implemented.

Response All the affected districts communicated the population affected during the disaster. Accordingly, the detailed plan for the resources required for relief operations was prepared and implemented.

Question No. 17 Whether any mechanism has been devised for distribution of relief goods (Food/Non Food items) or otherwise

Response Since the magnitude of floods 2010 was so gigantic and the demands were so high that PDMA had to devise a mechanism for distribution of relief goods.

Question No. 18 Whether any instruction issued to rescue organizations regarding declaration of emergency

Response Close coordination was maintained with armed forces and other rescuing agencies

Questions No. 19 Whether evacuation to safe place organized

Response Population under threat was safely evacuated as already mentioned in question No.13

Question No. 20 Whether any system regarding stock control mechanism was communicated

Response System regarding stock control mechanism was communicated.

Question No.21 Whether any Coordination at PDMAs level regarding stock management existed to have sufficient utilization of available stock at other provinces?

Response Coordination at PDMAs level regarding stock management existed to have sufficient utilization of available stock at other provinces.

Question No. 22 Whether initial and subsequent assessment and analysis of damages carried out in disaster affected areas, provide copy of the same

Response P&D Department carried out detailed assessment of damages in coordination with concerned departments.

Question No. 23 Whether any damage and relief assessment report was prepared?

Response The relief and damage assessment reports were prepared on daily basis and submitted to the concerned authority's.

Question No. 24 Whether administrative and financial powers are delegated, if yes, provide a copy?

Response The administrative and financial powers are delegated as per rules.

Annex-B (Para 2.5)

Sr. No	Description	Time Frame	Remarks
1.	Develop hazard specific contingency plans	2017	Only Flood Contingency Plans.
2.	Develop sectoral disaster risk management operation in federal ministries, departments and authorities.	2014	Still not developed
3.	Conduct detailed multi-hazard vulnerability and risk analysis/assessments at national level	2013-2015, 2017 & 2021	Partially completed
4.	Conduct detailed multi-hazard vulnerability and risk analysis/assessments at local level	2012-2013, 2016-17 & 2020-2021	Not conducted
5.	Conduct research and studies on impact of climate change on glaciers and ice cap	2012-2013	Not Conducted
6.	Strengthening and forecasting early warning systems	2012-2021	No system in place
7.	Prepare hazard maps at local scale in targeted locations	2012-2017	Partially
8.	Strengthen early warning dissemination systems	2014-16	No system in place
9.	Develop capacity of early warning and evacuation systems	2012-21	No system in place
10.	Promote mainstreaming DRR through capacity enhancement of governmental officers.	2014-21	No system in place
11.	Develop the capacity of communities to cope with disasters	2012-21	No development
12.	Raise people's awareness about disaster management	2012-21	No development
13.	Implement and disseminate CBDRM activities	2013	No development
14.	Establish disaster mitigation measures incorporated with existing development program	212-21	No system in place
15.	develop schools, hospitals and other important public facilities with safeguards against disasters	201-21	No system in place
16.	Protect important coastal facilities against disasters taking into account climate change	212-16	No system in place
17.	Enforce the building code during construction of buildings	2012-21	No development
18.	Enhance disaster risk management	2013-18	No development

	capacity in urban areas		
19.	Establish disaster risk reduction policies in National Development Plan and National Poverty Reduction Strategy	2013	No development
20.	Set up sectoral guidelines on mainstreaming disaster risk reduction	2013	No development
21.	Establish criteria to assess development projects from a risk reduction perspective	2013-15	No development
22.	Improve technical capacity of federal and provincial governments to integrate risk reduction into development plans and programs	2013-14	No development
23.	Enhance emergency response capacities, such as emergency operation centers, Civil Defence and urban search and rescue teams in major cities.	2014-21	No development
24.	Establish a robust communication system and efficient transport and logistics mechanism to be used during emergency situations.	2013-17	No development
25.	Develop and implement emergency response plans in relevant ministries and departments at federal, provincial and district levels	2014-18	No development