

**NATIONAL DISASTER MANAGEMENT AUTHORITY (NDMA)
THE ISLAMIC REPUBLIC OF PAKISTAN**

**THE PROJECT
FOR
NATIONAL DISASTER MANAGEMENT PLAN
IN
THE ISLAMIC REPUBLIC OF PAKISTAN**

FINAL REPORT

**HUMAN RESOURCE DEVELOPMENT PLAN
ON DISASTER MANAGEMENT**

MARCH 2013

JAPAN INTERNATIONAL COOPERATION AGENCY

**ORIENTAL CONSULTANTS CO., LTD.
CTI ENGINEERING INTERNATIONAL
OYO INTERNATIONAL CORPORATION**

PT
JR
13-001

**NATIONAL DISASTER MANAGEMENT AUTHORITY (NDMA)
THE ISLAMIC REPUBLIC OF PAKISTAN**

**THE PROJECT
FOR
NATIONAL DISASTER MANAGEMENT PLAN
IN
THE ISLAMIC REPUBLIC OF PAKISTAN**

FINAL REPORT

**HUMAN RESOURCE DEVELOPMENT PLAN
ON DISASTER MANAGEMENT**

MARCH 2013

JAPAN INTERNATIONAL COOPERATION AGENCY

**ORIENTAL CONSULTANTS CO., LTD.
CTI ENGINEERING INTERNATIONAL
OYO INTERNATIONAL CORPORATION**

The following foreign exchange rate is applied in the study:

US\$ 1.00 = PKR 88.4

PREFACE

The National Disaster Management Plan (NDMP) is a milestone in the history of Disaster Management System (DRM) in Pakistan. The rapid change in global climate has given rise to many disasters that pose severe threat to the human life, property and infrastructure. Disasters like floods, earthquakes, tsunamis, droughts, sediment disasters, avalanches, GLOFs and cyclones with storm surges are some prominent manifestations of climate change phenomenon. Pakistan, which is ranked in the top ten countries that are the most vulnerable to climate change effects, started planning to safeguard and secure the life, land and property of its people in particular the poor, the vulnerable and the marginalized. However, recurring disasters since 2005 have provided the required stimuli for accelerating the efforts towards capacity building of the responsible agencies, which include federal, provincial, district governments, community organizations, NGOs and individuals.

Prior to 2005, the West Pakistan National Calamities Act of 1958 was the available legal remedy that regulated the maintenance and restoration of order in areas affected by calamities and relief against such calamities. An Emergency Relief Cell within the Cabinet Division has been serving since 1971 as an institutional disaster relief support at the national level. Similar institutional arrangements existed at the provincial level in the form of relief commissioners. However, that regime provided a reactive approach towards emergency response only.

The United Nations International Strategy for Disaster Reduction (UNISDR) introduced the paradigm shift from a reactive to a proactive approach in the form of the Hyogo Framework of Action (2005-2015) signed by 168 countries including Pakistan. To fulfill the global obligations as well as to cope with the challenges emerged in the aftermath of the October 2005 earthquake, the Government of Pakistan promulgated the National Disaster Management Ordinance in 2007 to introduce a comprehensive National Disaster Management System in the country. The Ordinance became the Act called the National Disaster Management Act in December 2010. The Act establishes three tiers for the disaster management system: i.e., national, provincial and district levels.

Under the Act, the National Disaster Management Commission (NDMC) was established at the national level, and has the responsibility for laying down policies and guidelines for disaster risk management and approval of the National Plan. The National Disaster Management Authority (NDMA) was subsequently established in 2007 in line with the Act, and serves as the implementing, coordinating and monitoring body for disaster risk management at the national level. Along with the Ordinance (now Act), the National Disaster Risk Management Framework (NDRMF) was prepared by the NDMA in March 2007. The NDRMF served as an overall guideline for disaster risk management at national, provincial and district levels. In March 2010, the NDMA formulated the National Disaster Response Plan (NDRP) identifying specific roles and responsibilities of the relevant stakeholders in emergency response including Standard Operation Procedures (SOPs).

Concurrently, NDMA, in collaboration with national and international partners, had been in the process of strengthening the DRM system in the country. In order to support this new approach in Pakistan, the Japan International Cooperation Agency (JICA) dispatched a series of missions from the year 2008 to 2009 based on the request from the Government of Pakistan. It studied the whole legal and administrative system of DRM in Pakistan and held meetings with all stakeholders to identify the needs and requirements to enhance the capacity of the national DRM system. Based on thorough bilateral consultations, a project document on formulation of a National Disaster Management Plan (NDMP) for Pakistan was conceived for implementation through Japanese Grant-in-Aid. A PC-II was prepared accordingly and was approved by the Planning Commission in the meeting of Central Development Working Party held on 19-11-2009. For implementation through Grant-in-Aid, the scope of work for the project was discussed, agreed and signed between the Government of Pakistan and JICA on 11-12-2009 and the project Inception Report was prepared in April 2010. 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 National Disaster Management Act (Chapter II, Section 10), was finalized in June 2012.

The overall NDMP is a comprehensive plan, having a total investment cost of USD 1040.9 million (PKR 92.02 Bn with 1 USD = PKR 88.4), consisting of the “Main Plan” document along with three supporting volumes in addition to an Executive Summary, which identifies macro level hazards and risk assessment, development of the multi hazard early warning system to reduce the vulnerability to disasters by enhancing and strengthening the early warning capacity, identification of the roles and responsibilities of the stakeholders, including federal, provincial and district governments, community organizations, NGOs, businesses, and individuals who are involved in the disaster management. The Community Based Disaster Risk Management (CBDRM) approach, in view of its universal reorganization and importance in DRM planning, has been given due place in the Plan. Based on pilot activities tested in different hazard contexts and social settings, best practices and guidelines have been documented in the Plan to serve as models for future CBDRM activities in Pakistan. The Plan also provides strategic direction for systematic human resource development in the field of disaster management and the operational plan for the National Institute of Disaster Management (NIDM).

The components of NDMP published in one main document with three supporting volumes, besides the Executive Summary, are entitled:

- | | |
|---|-----------|
| • National Disaster Management Plan | Main Plan |
| • Human Resource Development Plan on Disaster Management | Vol. I |
| • Multi-Hazard Early Warning System Plan | Vol. II |
| • Instructors’ Guidelines on Community Based Disaster Risk Management | Vol. III |

Executive Summary

The plan consists of three parts: Part I Introduction, Part II Comprehensive Human Resource Development Plan and Part III NIDM Operation Plan.

PART I INTRODUCTION

1. Background

Human resources are one of the most important factors for reducing disaster damage. However, the current human resource development activities do not systematically provide sufficient human resources, in Pakistan and there is a big need for qualified human resources to boost disaster management. In order to provide direction for systematic human resource development in the field of disaster management, this Human Resource Development Plan (HRDP) has been developed. The HRDP is a supplemental document to other important documents regarding disaster management in Pakistan such as the National Disaster Management Act and the National Disaster Management Plan.

PART II COMPREHENSIVE HUMAN RESOURCE DEVELOPMENT PLAN

1. Framework of the Plan

Vision: To build a culture of safety and resilience at all levels utilizing knowledge, innovation and education

Goal: To improve preparedness against disasters and to reduce disaster damage.

Objective: A system of human resource development required in the field of disaster management will be established and human resources that promote “self-help efforts”, “mutual-help efforts”, and “public-help efforts” will be developed with better coordination.

Time frame: Ten (10) years (2012 to 2022)

2. Strategies

The following strategies will be adopted over the next ten years.

- Involvement of various organizations to implement the capacity building activities of stakeholder groups with good coordination;
- Emphasis on capacity building of main stakeholders groups;
- Development of a system of accumulation and sharing of research results and lessons learnt in the field of disaster management; and
- Fictionalization of NIDM as national level a focal organization for human resource development in the field of disaster management.

3. Outputs and Activities

In order to achieve its objectives, HRDP is expected to produce the following five (5) outputs. Each output shall be produced through several activities shown below in Table 1:

Table 1 Outputs and Activities of Comprehensive HRDP

Output	Activity
1. NIDM takes initiative for improvement of human resources in the field of disaster management	1-1 Setting up of organization of NIDM
	1-2 Construction of NIDM Building Complex
	1-3 Enhancement of coordination and partnerships with national and international organizations in the field of disaster management
	1-4 Systematization of DRM capacity building in various organizations
	1-5 Improvement of DRM training quality through technical advisories
	1-6 Establishment of a library and disaster information Resource Center (DIRC) specialized for disaster management
	1-7 Promotion of research in the field of disaster management
2. Capacity of governmental staff who are in charge of DRM is enhanced.	2-1 Implementation of DRM training courses for F/G/S/PDMAs and DDMA staff
	2-2 Capacity enhancement of urban search and rescue teams
	2-3 Implementation of regular refresher trainings for district fire brigades
	2-4 Implementation of DRM workshops for TMA staff
3. Capacity of staff of government offices related to disaster management is enhanced for mainstreaming DRR activities for their implementation.	3-1 Implementation of DRM workshops for relevant ministries
	3-2 Implementation of DRM workshops for relevant departments of provincial governments and state governments
	3-3 Implementation of DRM workshops for district governments
	3-4 Incorporation of DRM subjects into curriculum of government training institutes
4. Capacity of communities is enhanced to cope with disasters	4-1 Implementation of DRM workshops for community leaders
	4-2 Search and rescue trainings for members of community emergency response teams

5. Individuals are aware of importance of DRM.	5-1 Implementation of awareness campaigns for the general public
	5-2 Promotion of disaster education at schools
	5-3 Implementation of DRM workshops for university students

PART III NIDM OPERATION PLAN

1. Goal and Objectives

Goal: To promote human resource development in the field of disaster management in diverse ways.

Objectives: To accelerate construction of the NIDM building complex (Step1); to prepare the NIDM institution after the completion of the NIDM building complex; and to increase the number of people who implement DRR through human resource development (Step2).

Time Frame: Step 1 is from 2012 to 2016 (before NIDM is not fully operational) and Step 2 is after 2016 (after NIDM is fully operational).

2. Strategies

There are two strategies as below.

- Preparation for the full operation of NIDM
- Strengthening the institutional capacity of NIDM

3. Organizational Structure

Currently, the organizational structure of NIDM is not clear. Considering the roles and responsibilities regulated by the National Disaster Management Act, the proposed organizational structure is as shown below in Figure 1.

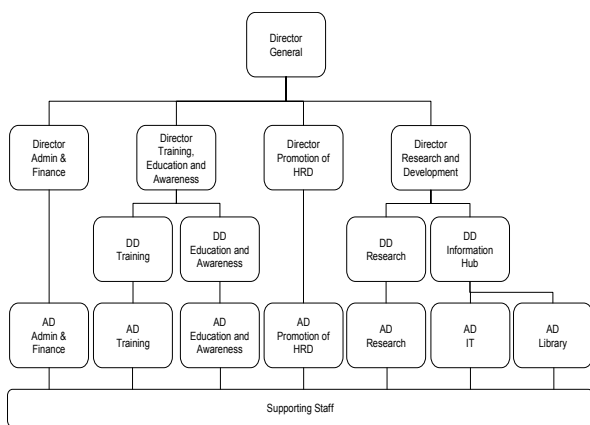


Figure 1 Proposed Organization Structure of NIDM

4. Activities for the Next Ten Years (2012-2022)

In order to achieve the objectives, the following sub-activities that need to be implemented step by step while institutional capacity of NIDM is strengthened are given in Table 2.

Table 2 Sub-Activities

Training	
T-1	Training of NDMA staff
T-2	Training of F/G/S/PDMA staff
T-3	Training of DDMA staff
T-4	Training of TMA staff through DDMA
T-5	Training of Staff of Federal Ministries
T-6	Training of university students
Education	
E-1	Incorporation of disaster management subjects into curriculum of governmental staff general training
E-2	Promotion of disaster education in basic education
E-3	Promotion of disaster education in higher education
Awareness	
A-1	Holding of national disaster management exhibition, seminars, workshops, conferences etc.
A-2	Awareness campaign through media
Promotion of Comprehensive Human Resource Development	
P-1	Enhancement of coordination among organizations which conduct capacity building in the field of disaster management
P-2	Technical advisories and assistances for human resource development activities in the field of disaster management
Research	
R-1	Establishment and operation of a library and Disaster Information Resource Center (DIRC)
R-2	Promotion of research in the field of disaster management

5. Implementation Schedule

The implementation schedule of the sub-activities is shown in Figure 2 below. Table 3 (a) & (b) indicate priority actions/programs for the next ten years under the overall NDMP & HRDP (Vol-II) respectively.

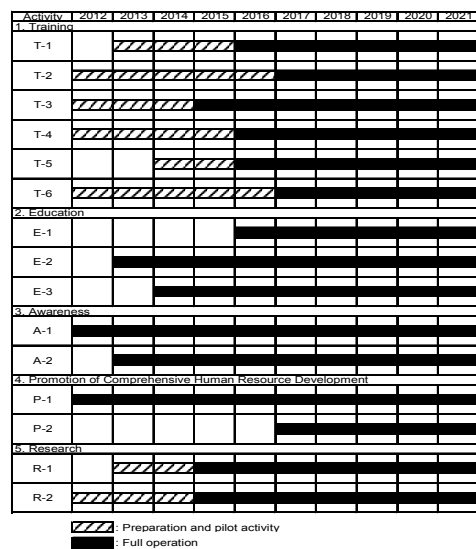


Figure 2 Implementation Schedule

Table 3 (a) Priority Actions/Programs for the Next Ten Years (2012-2022)

Strategy	app. Cost (million USD)	Time Frame									
		Phase 1				Phase 2			Phase 3		
		2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
4.1 Intervention-1: Establish the Institutional and Legal System for Disaster Management											
1. Establish and function disaster management organizations at national, provincial and district levels.	2.0										
2. Formulate disaster management operation plans for relevant organizations.	0.2										
3. Implement periodic meetings among the disaster management organizations to monitor the situations.	0.1										
4. Implement drills and training of disaster management activities in the organizations to improve their capacities.	-										
4.2 Intervention-2: Prepare Disaster Management Plans at Various Levels											
1. Formulate and update disaster management plans at national, provincial, district and community or TMA levels.	1.0										
2. Develop hazard specific contingency plans.	1.0										
3. Develop sectoral disaster risk management operation in federal ministries, departments and authorities.	1.0										
4.3 Intervention-3: Establish national hazard and vulnerability assessment											
1. Conduct detailed multi-hazard vulnerability and risk analysis/assessments at national level	14.0										
2. Conduct detailed multi-hazard vulnerability and risk analysis/assessments at local level	5.0										
3. Conduct research and studies on impact of climate change on glaciers and ice cap	5.0										
4.4 Intervention-4: Establish multi-hazard early warning and evacuation systems											
1. Strengthen forecasting and early warning systems	168.5										
2. Prepare hazard maps at local scale in targeted locations	5.7										
3. Strengthen early warning dissemination systems	3.1										
4. Develop capacity of early warning and evacuation systems	11.2										
4.5 Intervention-5: Promotion of training, education and awareness in relation to disaster management											
1. Develop NIDM (National Institute of Disaster Management) to promote human resource development in the field of disaster management.	20.7										
2. Enhance the capacity of government agencies in charge of disaster management.	12.9										
3. Promote mainstreaming DRR through capacity enhancement of governmental officers.	2.6										
4. Develop the capacity of communities to cope with disasters.	26.2										
5. Raise people's awareness of disaster management.	1.9										
4.6 Intervention-6: Strengthen awareness program on disaster risk reduction at local level											
1. Enhance knowledge on disasters management in the general public	1.0										
2. Establish safe evacuation places in the case of disaster situation	10.0										
3. Implement and disseminate CBDRM activities	1.0										
4. Disseminate self help and mutual help efforts in disaster management	1.0										
5. Establish disaster mitigation measures incorporated with existing development program	1.0										
4.7 Intervention-7: Infrastructure development for disaster risk reduction											
1. Develop schools, hospitals and other important public facilities with safe against disasters	100.0										
2. Protect important coastal facilities against disasters taking into account climate change	21.0										
3. Enforce the building code in construction of buildings	10.0										
4. Implement appropriate structural measures in flood prone areas taking into account comprehensive and integrated flood management plans	565.6										
5. Enhance disaster risk management capacity in urban areas	11.0										
4.8 Intervention-8: Mainstreaming disaster risk reduction into development											
1. Establish disaster risk reduction policies in National Development Plan and National Poverty Reduction Strategy	-										
2. Set up sectoral guidelines on mainstreaming disaster risk reduction	1.0										
3. Establish criteria to assess development projects from a risk reduction perspective	0.2										
4. Improve technical capacity of federal and provincial governments to integrate risk reduction into development plans and programs	-										
4.9 Intervention-9: Establish national emergency response system											
1. Establish and strengthen warehouse or stockpiling system for storing food, medicine, relief supplies and rescue equipments at strategic locations	10.0										
2. Enhance emergency response capacities, such as emergency operation centers, Civil Defence and urban search and rescue teams in major cities.	10.0										
3. Establish a robust communication system and efficient transport and logistics mechanism to be used during emergency situations.	6.0										
4. Develop and implement emergency response plans in relevant ministries and departments at federal, provincial and district levels	5.0										
5. Establish an National Disaster Management Fund to enable the federal government to organize emergency response effectively.	-										
4.10 Intervention-10: Capacity Development for Post Disaster Recovery											
1. Prepare guidelines for post disaster recovery programs and activities	1.0										
2. Develop capacity of stakeholders in post disaster recovery	3.0										
3. Develop system and methodology for recovery needs assessment	1.0										
Total Cost (million USD)	1,040.90										
Total Cost (billion PKR)	92.02										

1USD=88.4PKR

Table 3 (b) HRDP Priority Actions/Programs/Cost for the Next Ten Years (2012-2022)

Strategy	app. Cost (million USD)	Time Frame									
		Phase 1				Phase 2			Phase 3		
		2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
4.5 Intervention-5: Promotion of training, education and awareness in relation to disaster management											
1. Develop NIDM (National Institute of Disaster Management) to promote human resource development in the field of disaster management.	20.7										
2. Enhance the capacity of government agencies in charge of disaster management.	12.9										
3. Promote mainstreaming DRR through capacity enhancement of governmental officers.	2.6										
4. Develop the capacity of communities to cope with disasters.	26.2										
5. Raise people's awareness of disaster management.	1.9										
Total Cost (million USD)	64.30										
Total Cost (billion PKR)	5.68										

1USD=88.4PKR

TABLE OF CONTENTS

PREFACE

EXECUTIVE SUMMARY

TABLE OF CONTENTS

LIST OF FIGURES

LIST OF TABLES

LIST OF ABBREVIATION

LIST OF BASIC TERMS

	<u>Page</u>
PART I INTRODUCTION	1
CHAPTER 1 BACKGROUND OF THE PLAN.....	1
1.1 Background	1
1.2 Relation with Other Documents of Disaster Management.....	2
CHAPTER 2 COMPOSITION OF THE PLAN.....	3
2.1 Composition	3
2.2 Comprehensive Human Resource Development Plan.....	3
2.3 NIDM Operation Plan	3
PART II COMPREHENSIVE HUMAN RESOURCE DEVELOPMENT PLAN.....	5
CHAPTER 3 BASIS FOR PLANNING.....	5
3.1 Stakeholder Groups in Disaster Management and Necessary Competencies.....	5
3.2 Existing Conditions of Human Resource Development.....	9
3.3 Challenges of Human Resource Development.....	11
CHAPTER 4 COMPREHENSIVE HUMAN RESOURCE DEVELOPMENT PLAN.....	15
4.1 Framework of the Plan	15
4.2 Strategies	15
4.3 Outputs and Activities	16
4.4 Implementation Schedule	26
PART III NIDM OPERATION PLAN	27
CHAPTER 5 ROLES AND RESPONSIBILITIES OF NIDM IN HUMAN RESOURCE DEVELOPMENT.....	27
5.1 Roles and Responsibilities of NIDM from the Act	27

CHAPTER 6	EXISTING CONDITIONS	29
6.1	Before Establishment of NIDM.....	29
6.2	After Establishment of NIDM	31
CHAPTER 7	GAPS AND ISSUES	35
7.1	Review of Comprehensive Human Resource Development Plan	35
7.2	Gaps and Issues	36
CHAPTER 8	NIDM OPERATION PLAN	41
8.1	Goal and Objectives	41
8.2	Strategies	41
8.3	Organizational Structure.....	42
8.4	Training Courses to be provided by NIDM.....	43
8.5	Education and Awareness	48
8.6	Promotion of Comprehensive Human Resource Development.....	49
8.7	Research	49
8.8	NIDM Construction.....	50
CHAPTER 9	DESCRIPTION OF ACTIVITIES	51
9.1	List of Sub-Activities for the Next Ten Years.....	51
9.2	Training	52
9.3	Education.....	60
9.4	Awareness.....	63
9.5	Promotion of Comprehensive Human Resource Development.....	65
9.6	Research	68
9.7	Implementation Schedule and Estimated Cost	70
9.8	Activities by Year	72

APPENDICES

Appendix 1	List of the Organizations Interviewed regarding Capacity Building on DRM
Appendix 2	List of Resources for Human Resource Development Activities in the Field of Disaster Management (Not an Exhaustive List)
Appendix 3	Breakdown of Costs and Sub-Activities of Proposed Activities of Comprehensive HRDP

LIST OF FIGURES

	<u>Page</u>
Figure II.1 Stakeholder Groups in Disaster Management in Pakistan	6
Figure III.1 Proposed Organization Structure of NIDM	42
Figure III.2 Structured Program	44
Figure III.3 Proposed Construction Schedule	50
Figure III.4 Implementation Schedule	71

*Unless otherwise specified, the sources of figures in this report belong to JICA Expert Team.

LIST OF TABLES

	<u>Page</u>
Table II.1 List of Stakeholder Groups with Major Roles	7
Table II.2 Area of Competencies for Disaster Management	8
Table II.3 Necessary Competencies of Each Stakeholder	8
Table II.4 Capacity Building Organization for Each Stakeholder	9
Table II.5 Proposed Implementation Organizations of Human Resource Development	19
Table II.6 Implementation Schedule and Estimated Cost	26
Table III.1 List of Training Courses in 2010	32
Table III.2 Summary of the Comprehensive Human Resource Development Plan	35
Table III.3 Current Status of Expected Functions	37
Table III.4 Current Status of Activities Expected to be Implemented by NIDM under the Comprehensive Human Resource Development Plan	38
Table III.5 Proposed Short-term Training Courses by Target	45
Table III.6 Activity of Training by Target (2012-2016)	47
Table III.7 Activity of Training by Target (2017-2021)	48
Table III.8 Estimated Cost in US Dollars	72
Table III.9 Activities by Year	72

*Unless otherwise specified, the sources of tables in this report belong to JICA Expert Team.

LIST OF ABBREVIATION

ADB	Asian Development Bank	MDMA	Municipal Disaster Management Authority
ADPC	Asian Disaster Preparedness Center	NARC	National Agriculture Research Center
ADRC	Asian Disaster Reduction Center	NCMC	National Crisis Management Cell
AJ & K	Azad Jammu and Kashmir	NDMA	National Disaster Management Authority
APEC	Asia Pacific Economic Cooperation	NDMC	National Disaster Management Commission
CBDRM	Community Based Disaster Risk Management	NDMO	National Disaster Management Ordinance
CBOs	Community Based Organizations	NDMP	National Disaster Management Plan
CCB	Citizen Community Boards	NDRMF	National Disaster Risk Management Framework
CDPM	Center for Disaster Preparedness and Management	NDRP	National Disaster Response Plan
CDG	City District Government	NESPAK	National Engineering Services of Pakistan
CRS	Civil Services Academy	NEOC	National Emergency Operations Center
CSA	Civil Service Academy	NERC	National Emergency Relief Cell
DCO	District Coordination Officer	NGOs	Non-governmental Organizations
DDMA	District Disaster Management Authority	NHA	National Housing Authority
DDMU	District Disaster management	NIDM	National Institute of Disaster Management
DERA	Drought Emergency Relief Assistance	NIM	National Institute of Management
DG	Direction General	NLC	National Logistics Cell
D.G. Khan	Dera Ghazi Khan	NPO	Nonprofit Organization
D.I. Khan	Dera Ismail Khan	NSPP	National School of Public Policy
DIRC	Disaster Information Resource Center	NWFP	North West Frontier Province
DM	Disaster Management	PARD	Pakistan Academy for Rural Development
DMA	Disaster Management Authority	PDC	Pacific Disaster Center
DMEC	Disaster Management Exhibition and Conferences	PDMA	Provincial Disaster Management Authority
DNA	Damage and Needs Assessment	PLGA	Punjab Local Government Academy
DRM	Disaster Risk Management	PM	Prime Minister
DRMP	Disaster Risk Management Program	PMD	Pakistan Meteorological Department
DRR	Disaster Risk Reduction	PMF	Probable Maximum Flood
EAD	Economic Affairs Division	PPSA	Pakistan Provincial Service Academy Peshawar
EDO	Executive District Officer	PRCS	Pakistan Red Crescent Society
EOC	Emergency Operations Center	SAFWCO	Sindh Agriculture and Forestry Worker Coordinating Organization
ERC	Emergency Relief Cell	SDMA	State Disaster Management Authority
ERRA	Earthquake Reconstruction and Rehabilitation Authority	SDPI	Sustainable Development Policy Institute
FATA	Federally Administrated Tribal Areas	SOP	Standard Operating Procedure
FFC	Federal Flood Commission	SUPARCO	Space and Upper Atmospheric Research Corporation
FFD	Flood Forecasting Division	TMA	Tehsil Municipal Administration
F/G/S/P	FATA/GB/State/Provincial	TOT	Training of Trainers
GB	Gilgit Baltistan	TRDP	Thardeep Rural Development Program
GLOF	Glacial Lake Outburst Flood	UC	Union Council
GOP	Government of Pakistan	UN	United Nations
GPS	Global Positioning System	UNDP	United Nations Development Program
GSP	Geological Survey of Pakistan	UNESCO	United Nations Educational, Scientific and Cultural Organization
GTZ	German Society for Technical Cooperation (Deutsche Gesellschaft fur Technische Zusammenarbeit)	UNICEF	United Nations Children's Fund
ICHARM	International Center for Water Hazard	UNISDR	United Nations International Strategy for Disaster Reduction
ICIMOD	Integrated Mountain Development	UNHCR	United Nations High Commission for Refugees
IMG	Institute of Meteorology and Geophysics	USAR	Urban Search and Rescue
IRP	International Recovery Platform	WB	World Bank
ISDR	International Strategy for Disaster Reduction	WAPDA	Water and Power Development Authority
JBIC	Japan Bank for International Cooperation	WASA	Water and Sanitation Agency
JICA	Japan International Cooperation Agency	WFP	World Food Program
KP	Khyber Pakhtunkhwa	WWF	World Wide Fund
M&E	Monitoring and Evaluation		
MALC	Marie Adelaide Leprosy Center		

In case of KP, 'DDMA' may be read as DDMU

LIST OF BASIC TERMS

Acceptable risk

The level of loss a society or community considers it can live with and for which it does not need to invest in mitigation

Biological hazard

Biological vectors, micro-organisms, toxins and bioactive substances, which may cause the loss of life or injury, property damage, social and economic disruption or environmental degradation.

Capacity

A combination of all the strengths and resources available within a community, society or organization that can reduce the level of risk, or the effects of a disaster.

Capacity may include physical, institutional, social or economic means as well as skilled personnel or collective attributes such as leadership and management. Capacity may also be described as capability.

Capacity building

Efforts aimed to develop human skills or societal infrastructure within a community or organization needed to reduce the level of risk. In extended understanding, capacity building also includes development of institutional, financial, political and other resources, at different levels of the society.

Climate change

The climate of a place or region is changed if over an extended period (typically decades or longer) there is a statistically significant change in measurements of either the mean temperature or variability of the climate for that region.

Coping capacity

The means by which people or organizations use available resources and abilities to face a disaster. In general, this involves managing resources, both in normal times as well as during crises or adverse conditions.

Disaster

A serious disruption of the functioning of a community or society causing widespread human, material, economic or environmental losses which exceed the ability of the affected community or society to cope using its own resources. It results from the combination of hazards, conditions of vulnerability and insufficient capacity to reduce the potential negative consequences of risk.

Disaster risk management (DRM)

The comprehensive approach to reduce the adverse impacts of a disaster. DRM encompasses all actions taken before, during, and after the disasters. It includes activities on mitigation, preparedness, emergency response, recovery, rehabilitation, and reconstruction.

Disaster risk reduction/disaster reduction

The measures aimed to minimize vulnerabilities and disaster risks throughout a society, to avoid (prevention) or to limit (mitigation and preparedness) the adverse impacts of hazards, within the broad context of sustainable development.

Early warning

The provision of timely and effective information, through identified institutions, to communities and individuals so that they could take action to reduce their risks and prepare for effective response.

Emergency management

The management and deployment of resources for dealing with all aspects of emergencies, in particularly preparedness, response and rehabilitation

Forecast

Estimate of the occurrence of a future event (UNESCO, WMO). This term is used with different meanings in different disciplines.

Geological hazard

Natural earth processes that may cause the loss of life or injury, property damage, social and economic disruption or environmental degradation. For example earthquakes, tsunamis, volcanic activity and emissions, landslides, rockslides, rock falls or avalanches, surface collapses, expansive soils and debris or mud flows.

Hazard

Potentially damaging physical event or phenomenon that may cause the loss of life or injury, property damage, social and economic disruption or environmental degradation.

Hazards can include natural (geological, hydro meteorological and biological) or induced by human processes (environmental degradation and technological hazards). Hazards can be single, sequential or combined in their origin and effects. Each hazard is characterized by its location, intensity, frequency and probability.

Hazard analysis

Identification, studies and monitoring of any hazard to determine its potential, origin, characteristics and behavior.

Land-Use planning

Branch of physical and socio-economic planning that determines the means and assesses the values or limitations of various options in which land is to be utilized, with the corresponding effects on different segments of the population or interests of a community taken into account in resulting decisions. Land-use planning can help to mitigate disasters and reduce risks by discouraging high-density settlements and construction of key installations in hazard-prone areas, control of population density and expansion. Mitigation Structural and non-structural measures undertaken to limit the adverse impact of natural hazards, environmental degradation and technological hazards.

Natural hazards

Natural processes or phenomena occurring on the earth that may constitute a damaging event. Natural hazards can be classified by origin namely: geological, hydro meteorological or biological. Hazardous events can vary in magnitude or intensity, frequency, duration, area of extent, speed of onset, spatial dispersion and temporal spacing.

Preparedness

Activities and measures taken in advance to ensure effective response to the impact of hazards, including the issuance of timely and effective early warnings and the temporary evacuation of people and property from threatened locations.

Prevention

Activities to ensure complete avoidance of the adverse impact of hazards.

Public awareness

The processes of informing the general population, increasing levels of consciousness about risks and how people can reduce their exposure to hazards. This is particularly important for public officials in fulfilling their responsibilities to save lives and property in the event of a disaster.

Recovery

Decisions and actions taken after a disaster with a view to restoring or improving the pre-disaster living conditions of the stricken community, while encouraging and facilitating necessary adjustments to reduce disaster risk.

Relief / response

The provision of assistance during or immediately after a disaster to meet the life preservation and basic subsistence needs of those people affected. It can be of an immediate, short-term, or protracted duration.

Resilience / resilient

The capacity of a community, society or organization potentially exposed to hazards to adapt, by resisting or changing in order to maintain an acceptable level of functioning. Resilience can be increased by learning from past disasters for better future protection and to improve risk reduction measures.

Retrofitting (or upgrading)

Reinforcement of existing buildings and structures to become more resistant and resilient to the forces of natural hazards.

Risk

The chances of losses (deaths, injuries, property, livelihoods, economic activity disrupted or environment damaged) resulting from interactions between hazards and vulnerable social conditions. Risk is expressed as Risk = Hazards x Vulnerability. Some experts also include the concept of exposure to refer to the physical aspects of vulnerability.

Risk assessment/analysis

A methodology to determine the nature and extent of risk by analyzing potential hazards and evaluating existing vulnerability that could pose a potential threat to people, property, livelihoods and the environment.

Structural/non-structural measures

Structural measures refer to any physical construction to reduce or avoid possible impacts of hazards, which include engineering measures and construction of hazard-resistant and protective structures and infrastructure.

Non-structural measures refer to policies, awareness, knowledge development, public commitment, and methods and operating practices, including participatory mechanisms and the provision of information, which can reduce risk and related impacts.

Sustainable development

Development that meets the needs of the present without compromising the ability of future generations to meet their own needs. It contains within it two key concepts: the concept of "needs", in particular the essential needs of the world's poor, to which overriding priority should be given; and the idea of limitations imposed by the state of technology and social organization on the environment's ability to meet present and the future needs. (Brundtland Commission, 1987).

Technological hazards

Danger originating from technological or industrial accidents, infrastructure failures or certain human activities, which may cause the loss of life or injury, property damage, social and economic disruption or environmental degradation. Some examples: industrial pollution, nuclear activities and radioactivity, toxic wastes, dam failures; transport, explosions, fires, spills.

Vulnerability

The conditions determined by physical, social, economic and environmental factors or processes, which increase the susceptibility of a community or society to the impact of hazards.

Wildland fire

Any fire occurring in vegetation areas regardless of ignition sources, damages or benefits.

PART I
INTRODUCTION

PART I INTRODUCTION

CHAPTER 1 Background of the Plan

1.1 Background

Human resources are one of the most important factors to reduce disaster damage. There are various measures to reduce disaster damage. For example, governments implement structural mitigation measures of infrastructure. At the same time, people prepare for the time of disasters by confirming evacuation places and evacuation routes as well as preparing an evacuation kit. However, these necessary measures can be implemented only if people understand their importance. The society cannot be strengthened against disaster damage until the people who are expected to implement necessary DRR measures understand the importance of DRR activities and take necessary actions.

Human resources in the field of disaster management are still under development in Pakistan. Disaster management in Pakistan has concentrated on emergency response in the past. Therefore, human resources required for emergency response such as staff of PMD (Pakistan Meteorological Department) and rescue team members (Army, Police, Fire Brigades, Civil Defense, Rescue 1122, etc.) have been developed relatively well. On the other hand, human resources required for other phases of the disaster cycle as well as comprehensive disaster management were not well developed. The concept of comprehensive disaster management itself is new in Pakistan. After the big earthquake in 2005, the National Disaster Management Ordinance was promulgated in 2007, and which became the National Disaster Management Act in 2010 after the assent of the President, and the disaster management system has been established since then. Human resource development activities that produce human resources required for the new disaster management system started at that time and continue to the present. However, the current human resource development activities do not yet provide sufficient human resources systematically yet and there are large needs for qualified human resources to boost disaster management in this country.

In order to provide direction for systematic human resource development in the field of disaster management, this Human Resource Development Plan has been developed. There are various stakeholder groups in the field of disaster management from government officers to community rescue volunteers. It is necessary to enhance the capacity of each stakeholder group to make the society strong against disaster damages. Therefore, this Human Resource Development Plan provides direction for overall human resource development: that is, the plan clarifies what kinds of stakeholder groups exist and what kinds of capacity building activities are needed for each group. At the same time, considering the limited resources, stakeholder groups that are higher

priority than others have been specified to enhance capacity of these stakeholder groups more intensively.

Moreover, this Human Resource Development Plan includes an operation plan for National Institute of Disaster Management (NIDM). NIDM is expected to be a focal organization of human resource development activities in the field of disaster management. However, it does not fulfill its expected functions yet because it has just been established. It is essential to functionalize NIDM as soon as possible so as to accelerate human resource development activities and the operation plan has been developed for this purpose.

The target year of this Human Resource Development Plan is for ten years from 2012 to 2022. By the year 2022, it aims that human resource development activities in the field of disaster management are well harmonized and produce required human resources to improve disaster management in Pakistan.

1.2 Relation with Other Documents of Disaster Management

The Human Resource Development Plan is a supplemental document to other important documents of disaster management in Pakistan. The plan is developed in line with the National Disaster Management Act, National Disaster Risk Management Framework (NDRMF), and National Disaster Management Plan (NDMP). Since this Human Resource Development Plan focuses only on human resource development activities in the field of disaster management, it describes a more systematic and detailed plan for human resource development activities than NDRMF and NDMP.

CHAPTER 2 Composition of the Plan

2.1 Composition

The plan consists of three parts: Part I Introduction, Part II Comprehensive Human Resource Development Plan and Part III NIDM Operation Plan. The major parts are Part II and Part III. Part II (Comprehensive Human Resource Development Plan) is a plan for overall human resource development in the field of disaster management. Part III (NIDM Operation Plan) is a plan to functionalize NIDM.

2.2 Comprehensive Human Resource Development Plan

The Comprehensive Human Resource Development Plan describes what should be done to improve overall human resource development activities in the field of disaster management for the next 10 years. Various human resources are needed for disaster management. For example, staff of disaster management authorities is needed for overall disaster management. Trained rescue people are required at the time of emergency. Community leaders mobilize communities to prepare for coming disasters. In order to strengthen the society against disaster damage, it is necessary to build the capacity of these human resources. Therefore, this Comprehensive Human Resource Development Plan deals with what kind of human resources there are in the field of disaster management, what kind of competencies they need to acquire, and how to build the capacity of these human resources. In addition, it describes what should be done to promote overall human resource development activities.

2.3 NIDM Operation Plan

The NIDM Operation Plan describes how to functionalize NIDM so that it can fulfill its expected role for promoting human resource development activities in the field of disaster management. The National Disaster Management Act defines NIDM as a focal organization of human resource development activities and NIDM was established to play the function of a focal organization. However, it has just started its activities and it does not play all expected functions yet. On the other hand, capacity building of human resources required for disaster management is an urgent issue because Pakistan suffers from several natural disasters every year. In order to produce necessary human resources, it is essential to functionalize NIDM as soon as possible. The NIDM operation plan is developed for that purpose. It describes the expected roles of NIDM in the National Disaster Management Act, current conditions, gaps and issues, and what should be done to functionalize NIDM for the next 10 years. It also includes required the institutional arrangements and facilities to play its expected role.

**PART II
COMPREHENSIVE HUMAN RESOURCE
DEVELOPMENT PLAN**

PART II COMPREHENSIVE HUMAN RESOURCE DEVELOPMENT PLAN

CHAPTER 3 Basis for Planning

3.1 Stakeholder Groups in Disaster Management and Necessary Competencies

3.1.1 Stakeholder Groups in Disaster Management in Pakistan

There are various activities done by different organizations for disaster risk management. For example, mitigation measures should be done to infrastructure by relevant governmental organizations in the pre-disaster phase. Purchasing necessary goods in case of emergency and evacuation drills should be conducted by each individual in the pre-disaster phase. During a disaster, search and rescue teams would rescue people at the disaster site. Coordination among relevant organizations for relief goods should be done properly during a disaster. After a disaster, reconstruction of infrastructure should be done by relevant governmental organizations. Each individual should make efforts for recovery and reconstruction. Disaster risk management includes many activities by different people.

In order to make a society strong against disasters, it is necessary to specify what types of people are engaged in disaster management and strengthen their capacity so that these people can implement necessary activities. In order to clarify targets and contents for human resource development in the field of disaster management, it is important to know what type of stakeholder groups there are for disaster management and what kinds of competencies each type of stakeholder group needs to accommodate to play their parts for in disaster management.

It is necessary to strengthen capacity of stakeholder groups that make “self-help efforts,” “mutual-help efforts,” and “public-help efforts” towards reduction of disaster damage. When these three efforts are made at maximum, a society becomes much stronger against disaster damage. “Self-help efforts” are the efforts done by each individual to reduce damage from disasters, such as confirming evacuation routes, keeping emergency bags, and strengthening buildings against disasters. “Mutual-help efforts” are the efforts done by community-based organizations, such as preparing a risk map of the community, conducting evacuation drills in a community, and helping each other at evacuation camps. “Public-help efforts” are the efforts done by governments for risk reduction, such as mitigating risks of public infrastructures, keeping emergency equipment, providing search and rescue, managing evacuation camps, and implementing measures for recovery. Stakeholder groups which are expected to make these

efforts (called the “main stakeholder groups”) should be enhanced first. The figure below shows what stakeholder groups in Pakistan there are for these three efforts.

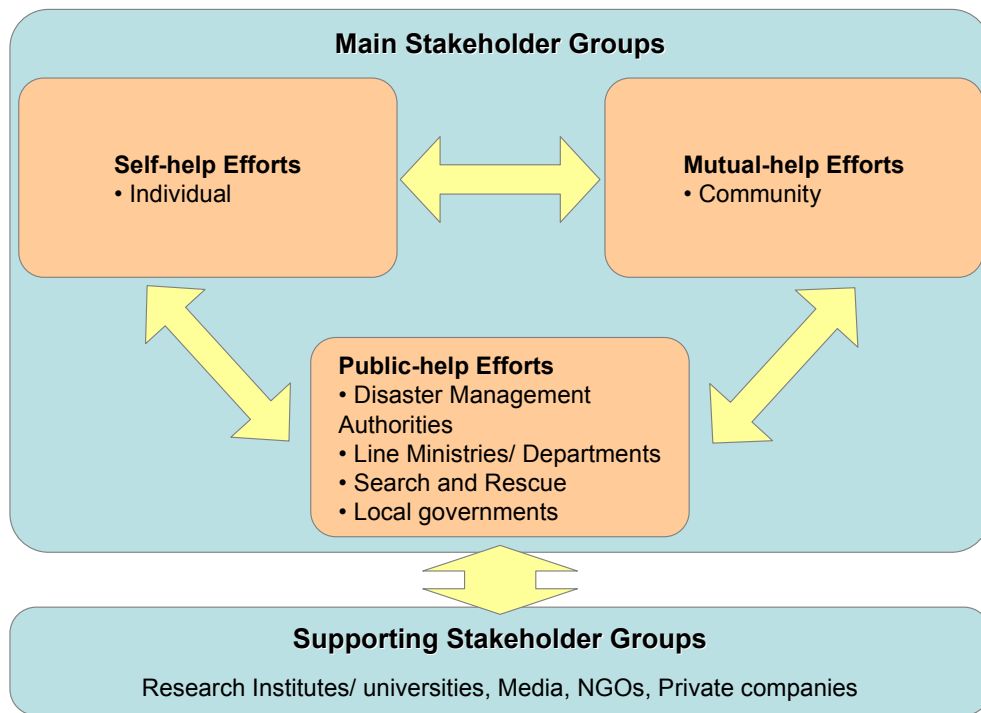


Figure II.1 Stakeholder Groups in Disaster Management in Pakistan

In addition to the main stakeholder groups, there are supporting stakeholder groups as shown in the figure, which consist of research institutes/ universities, media, NGOs, and private companies. It is important to build the capacity of these groups. These groups support disaster management activities done by main stakeholder groups in various ways, utilizing the specialties of each organization. For instance, research institutes provide the latest research results for improving measures for disaster risk reductions. Media can promote awareness towards disaster management before disasters and will provide necessary information to people during disasters. In order to strengthen disaster management in the country, it is also essential to enhance the capacity of these stakeholder groups.

The stakeholder groups are listed in the following table.

Table II.1 List of Stakeholder Groups with Major Roles

Stakeholder Groups	Composition	Major Roles
Main Stakeholder Groups		
Self-help Efforts		
Individuals	Adults, children	<ul style="list-style-type: none"> • Preparation for disasters • Evacuation • Life saving, response and rescue
Mutual-help Efforts		
Communities	Community leaders, community rescue team members	<ul style="list-style-type: none"> • Preparation for disasters • Capacity building of community members • Evacuation • Search and rescue • Life saving and response
Public-help Efforts		
Disaster management authorities	NDMA, F/G/S/PDMAs, DDMA's	<ul style="list-style-type: none"> • Policy formulation • Coordination • Implementation • Advice to other organizations • Capacity building of main stakeholder groups • Capacity building of other stakeholder groups • Rescue and response • Relief management
Line ministries/ departments	Federal ministries, departments of provincial governments, departments of district governments	<ul style="list-style-type: none"> • Policy formulation • Implementation of necessary measures • Emergency response in the field of services of each organization • Reconstruction in the field of services of each organization
Search and rescue teams	Army, Police, Civil Defense, Fire Brigade (including Rescue 1122) at federal, provincial, and district levels	<ul style="list-style-type: none"> • Search and rescue • Response • Capacity building of other stakeholder groups
Local governments	TMA's	<ul style="list-style-type: none"> • Implementation of necessary measures (small-scale disaster mitigation works, preparation for emergency response, awareness campaign, etc.) • Damage and needs assessment • Management of evacuation camps
Supporting Stakeholder Groups		
Research institutes/ universities	Universities, colleges, schools, vocational Centers/institutions, research institutions	<ul style="list-style-type: none"> • Research • Damage assessment • Feedback research results • Capacity building of students and researchers
Private companies	Consulting firms, construction companies, contractors, etc.	<ul style="list-style-type: none"> • Conduct own business in line with disaster management laws and policies • Support the society utilizing own resources
Media companies	-	<ul style="list-style-type: none"> • Information collection and dissemination • Development of liaison/ relationship with disaster management agencies
NGOs	International NGOs, National NGOs, Networks, CBOs, civil society	<ul style="list-style-type: none"> • Conduct own activities in line with disaster management laws and policies • Support the society utilizing its own resources

3.1.2 Area of Competencies for Disaster Management

There are several areas of competencies to carry out necessary activities for disaster management. The table below shows areas of competencies that are required to implement disaster management in all phases of the disaster cycle. It is not necessary for every stakeholder to have all areas of competencies shown in the table. Rather, each stakeholder should have some of these areas of competencies based on its roles expected in the field of disaster management.

Table II.2 Area of Competencies for Disaster Management

	Area of Competencies	Brief Description
1	General knowledge of disasters	Knowledge of what constitutes a disaster, types of disaster, what happens in each type of disaster, disasters specific to Pakistan and the region, etc.
2	Specific and technical knowledge of disasters	Scientific knowledge of the mechanisms of each type of disaster (flood, earthquake, tsunami, landslide, cyclone, drought, GLOF, avalanche, etc.), etc.
3	General knowledge of disaster management	Knowledge of what disaster management involves, what kinds of activities should be conducted at each cycle, laws and policies related to disaster management, etc.
4	General knowledge of mitigation and preparedness	Knowledge of what mitigation and preparedness involves, what kinds of activities there are for mitigation and preparedness, laws and policies related to mitigation and preparedness, roles of relevant organizations for mitigation and preparedness, etc.
5	Specific and technical knowledge and skills in mitigation and preparedness	Technical knowledge of measures of mitigation and preparedness for each type of disaster and their effectiveness and utility, etc.
6	General knowledge of emergency response	Knowledge of what emergency response involves, what kinds of activities there are in emergency response, laws and policies related to emergency response, roles of relevant organizations for emergency response, etc.
7	Skills in emergency response	Skills of evacuation, damage assessment, data collection, management of camps, life saving, relief coordination, public relations, etc.
8	Skills in rescue and first aid for emergency response	Skills of search and rescue for each type of disaster, life saving, first aid, triage, etc.
9	General knowledge of recovery and reconstruction	Knowledge of what recovery and reconstruction involves, what kinds of activities there are for recovery and reconstruction, laws and policies related to recovery and reconstruction, roles of relevant organizations for recovery and reconstruction, etc.
10	Specific and technical knowledge and skills in recovery and reconstruction	Technical knowledge regarding measures for recovery and reconstruction for each type of disaster, recovery and reconstruction done in the past, etc.
11	Training skills for disaster management	Training skills of subjects related to disaster management, etc.

3.1.3 Necessary Competencies for each Stakeholder Group

Considering the roles each stakeholder group has to play, necessary competencies for each stakeholder group are identified below. It is expected that each stakeholder group has at least the areas of competencies identified in the table in order to play its part in the field of disaster management.

Table II.3 Necessary Competencies of Each Stakeholder

Stakeholder Groups	Necessary Areas of Competencies
Main Stakeholder Groups	
Individuals	1, 3, 4, 6, 7, 9
Communities	1, 3, 4, 6, 7, 9 8 (Community rescue team members)
Disaster management authorities	1, 3, 4, 6, 7, 9, 11
Line ministries/ departments	1, 2, 3, 4, 5, 6, 7, 9, 10, 11
Search and rescue teams	1, 2, 3, 6, 7, 8, 11
Local governments	1, 3, 4, 6, 7, 8, 9, 11
Supporting Stakeholder Groups	
Research institutes/ universities	1, 2, 3, 4, 5, 9, 10, 11
Private companies	1, 3, 4, 9 2, 5, 6, 8, 10 (depending on business areas)
Media companies	1, 3, 4, 6, 7, 9
NGOs	1, 3, 4, 6, 7, 9, 11 2, 5, 8, 10 (depending on activity area)

3.2 Existing Conditions of Human Resource Development

3.2.1 Current Human Resource Development Activities

Presently, various organizations conduct human resource development activities in the field of disaster management in Pakistan. The JICA Study Team interviewed organizations that conduct human resource development activities in the field of disaster management in some way. The activities conducted by these organizations are summarized in the table below by stakeholder group. It should be noted that the JICA Study Team could not cover all organizations that conduct human resource development activities and therefore, the table just summarizes activities done by those organizations that were interviewed. A list of interviewed organizations is attached. It is assumed that there are more organizations that conduct human resource development activities in the field of disaster management.

Table II.4 Capacity Building Organization for Each Stakeholder

Stakeholder Groups	Targets	Capacity Building Organization	Area of Competency	Institutionalized or not
Main Stakeholder Groups				
Individual	Adults	Civil Defense Lahore (through governmental offices, companies, NGOs)	6, 8	No
		NDMA/NIDM	1, 3, 6	No
		F/G/S/PDMA	1, 6, 7	No
		Rescue 1122	6, 7	No
		Pakistan Red Crescent Society (PRCS)	6, 8	No
	Children	Rescue 1122	6, 7	No
		PMD	1, 4	No
		Pakistan Red Crescent Society (PRCS)	6, 8	No
Community	Community leaders and members	NDMA/NIDM	6, 7	No
		Punjab Rural Support Program (NGO)	3, 4, 9	No
		DDMA Manshera (through International Institute for Disaster Risk Management)	1, 7, 8	No
		Sindh Rural Support Corporation (NGO)	1, 6, 7	No
		Sindh Agriculture and Forestry Worker Coordinating Organization (SAFWCO) (NGO)	1, 3, 6, 7	No
		Thardeep Rural Development Program (TRDP) (NGO)	1, 2, 4, 5	No
		Yar Muhammad Samedo Educational and Development Organization (NGO)	7, 8	No
		Marie Adelaide Leprosy Center (MALC)	1, 4, 6, 7	No
	Community rescue team members	NDMA/NIDM	6, 7, 8	No
		Rescue 1122	6, 7, 8	No
		Civil Defense Lahore	6, 7, 8	No
		Pakistan Red Crescent Society (PRCS)	6, 8	No
	Disaster management authorities	Staff of NDMA	NDMA/NIDM	1, 3
Staff of F/G/S/PDMA		NDMA/NIDM	1, 3, 4, 6	No
Staff of DDMA		NDMA/NIDM	1, 3, 4, 6	No
Line ministries/ departments	Staff of federal ministries/ agencies	NDMA/NIDM	1, 3	No
	PMD staff	PMD	1, 2, 4, 5	Yes
	Staff of provincial	NDMA/NIDM	1, 3	No

Stakeholder Groups	Targets	Capacity Building Organization	Area of Competency	Institutionalized or not
	government	Pakistan Provincial Service Academy Peshawar (PPSA)	1, 3, 6, 7	Yes
		Pakistan Academy for Rural Development (PARD)	1, 3, 6, 7	Yes
	School teachers	Rescue 1122	6	No
		Pakistan Red Crescent Society (PRCS)	6, 8	No
	Staff of health units	Lady Reading Hospital	7, 8	Yes
		Pakistan Institute of Medical Sciences	8	Yes
Staff of district government	NDMA/NIDM	1, 3, 4, 6	No	
	NESPAK	1, 2, 3, 4, 5	No	
Search and rescue teams	Staff of Civil Defense (Federal)	Directorate General Civil Defense	6, 8	Yes
	Staff of Rescue 1122 (Provincial and District)	Rescue 1122	1, 3, 6, 8	Yes
	Staff of Civil Defense (Provincial)	Directorate General Civil Defense	6, 8	Yes
	Staff of Civil Defense (Provincial and District)	Civil Defense Lahore	6, 8	Yes
	Staff of Police (Provincial)	Punjab Constabulary	1, 6, 7, 8	Yes
Local governments	Staff of Tehsil Municipal Administration	Punjab Local Government Academy (PLGA)	1, 3, 4, 6	Yes
		NESPAK	1, 2, 3, 4, 5	No
Supporting Stakeholder Groups				
Research institutes/ universities	Own students	Preston University	1, 2, 3, 4, 5, 6, 7, 9	Yes
		University of Peshawar, Earthquake Technology Institute and Engineering Center	1, 2, 3, 4, 5	Yes
		NED University	1, 2, 3, 4, 5, 6	Yes
		National Agriculture Research Center (NARC)	1, 2, 4, 5	Yes
		Pakistan Institute of Medical Sciences	8	Yes
		UET Lahore	1, 2, 3, 4	Yes
Private companies	Engineers	NDMA/NIDM	4, 5	No
		NESPAK	1, 2, 3, 4, 5	Yes
Media companies	Staff of media companies	NDMA/NIDM	1, 3	No
NGOs	Staff of NGOs	NDMA/NIDM	1, 3, 4, 6	No
		OXFAM (NGO)	7	No
	Own staff	Punjab Rural Support Program (NGO)	3, 4, 9	No
		Sindh Rural Support Corporation (NGO)	1, 6, 7	No
		Sindh Agriculture and Forestry Worker Coordinating Organization (SAFWCO) (NGO)	1, 3, 6, 7	No
		Thardeep Rural Development Program (TRDP) (NGO)	1, 2, 4, 5	No
		Civil Defense Lahore	6, 7, 8	No
		Pakistan Red Crescent Society (PRCS)	6, 8	No
		Yar Muhammad Samedo Educational and Development Organization (NGO)	7, 8	No
		Edhi Welfare Center	7, 8	Yes
		Marie Adelaide Leprosy Center (MALC)	1, 4, 6, 7	No
		NED University	1, 4	No
		Save the Children (NGO)	7, 8	No

Note : Areas of Competency, 1) General knowledge of disasters, 2) Specific and technical knowledge of disasters, 3) General knowledge of disaster management, 4) General knowledge of mitigation and preparedness, 5) Specific and technical knowledge and skills in mitigation and preparedness, 6) General knowledge of emergency response, 7) Skills in emergency response, 8) Skills in rescue and first aid for emergency response, 9) General knowledge of recovery and reconstruction, 10) Specific and technical knowledge and skills in recovery and reconstruction, 11) Training skills for disaster management

3.2.2 Issues of Current Activities

The visited organizations were asked about their challenges in human resource development activities in the field of disaster management. Since these organizations deal with different topics, many challenges are unique to their organizations. However, there are some issues that are common to many organizations as follows.

- Lack of highly qualified trainers/ teachers in the field of disaster management
- Lack of training equipment needed for themes related to disaster management (especially equipment for rescue and first aid and equipment for laboratories)
- Limited budget for human resource development activities (from own organizations as well as governments)
- No or very limited relations with other organizations which conduct human resource development activities in the field of disaster management including NDMA/NIDM

3.3 Challenges of Human Resource Development

Although current conditions of human resource development activities described in the previous chapter do not tell the whole picture, it shows certain aspects and tendencies of current activities and it is assumed that it tells us present challenges of human resource development activities. The following challenges can be depicted by analyzing the current conditions mentioned in the previous chapter.

Human resource development activities in the field of disaster management should be institutionalized in most organizations.

Although many organizations conduct human resource development activities in the field of disaster management, most of the activities are based on requests/needs with available funds at the moment, except for training of rescue team members and training courses provided by several research institutes/ universities. Stakeholder groups that have a large number of targets should be trained systematically so that all targets in the groups are well trained. These stakeholder groups are federal ministries/ agencies, provincial governments, DDMA, district governments, Tehsil municipal administrations, schools, communities, individuals, and community rescue teams. In particular, there are few human resource development activities for schools and children (individuals). Themes related to disaster management are now incorporated into several subjects of the national curriculum. However, the national curriculum is not fully implemented at school levels yet and therefore, teachers are not trained in these matters and disaster education is not provided to students at schools. It is necessary to systematize human resource development activities for each stakeholder group so as to provide continuous and sustainable capacity building to the targets of these stakeholder groups.

The quality of training courses should be controlled properly.

Currently, there is no system to check the quality of training courses related to disaster management. Basically, each organization develops its training materials and trains trainers by itself or hires trainers from other organizations. Most organizations do not have many experts in disaster management, which means that it is difficult for them to check the quality of the training courses. They have already realized this point and mentioned that one of their challenges is that they do not have highly qualified trainers. In addition, it is pointed out that many organizations are lacking training equipment. Although training courses related to disaster management are conducted by many organizations, it is not certain whether they are adequate or not.

Contents of human resource development activities should cover not only “emergency response” but also “mitigation and preparedness” and “recovery and reconstruction”.

As shown in the table above, more training courses on emergency response are conducted than training courses on mitigation and preparedness or recovery and reconstruction. This is probably because disaster management in Pakistan in the past was more oriented to emergency response leaving mitigation and preparedness as well as recovery and reconstruction comparatively ignored. It is important that stakeholder groups have knowledge and skills in emergency response and that this kind of training should be continued. However, at the same time, training courses or academic courses on mitigation and preparedness as well as recovery and reconstruction should be increased to strengthen the disaster management system of Pakistan.

Capacity building of main stakeholder groups should be more focused.

Main stakeholder groups are the people who make “self-help efforts”, “mutual-help efforts”, and “public-help efforts” and it is essential to build the capacity of these groups. In Pakistan, disaster management and disaster risk reduction are still new concepts and these three efforts have just started. Therefore, it is necessary to enhance all these three efforts to strengthen disaster management in Pakistan. However, as shown in the previous chapter, it cannot be said that capacity building activities of these main stakeholder groups are sufficient. Capacity building activities for these stakeholder groups are not systematized at most of the responsible organizations and they are not conducted for all targets of these stakeholder groups yet. Considering the limited resources, it is necessary to prioritize stakeholder groups to train. The main stakeholder groups are the people who should be trained first. In order to strengthen the society against disaster damage, the training should be started to reliably enhance the capacities of the main stakeholder groups to promote the three efforts.

Coordination among organizations that conduct human resource development activities should be established.

As shown, there are many stakeholder groups in the field of disaster management and many organizations providing human resource development activities to different stakeholder groups. In order to avoid duplications and utilize limited resources optimally, it is necessary for organizations that conduct human resource development activities to share information on the contents and targets of training courses and training materials among them for coordination. However, it is identified that there is no such type of coordination at present. Moreover, interviewed organizations were asked whether they have regular contact with NDMA/NIDM and most of them answered that there is no regular contacts with NDMA/NIDM at the moment. It can be said that most of the organizations isolate themselves in terms of human resource development activities. Since several interviewed organizations have asked for coordination to improve their activities, it is better to start coordination among relevant organizations.

CHAPTER 4 Comprehensive Human Resource Development Plan

4.1 Framework of the Plan

4.1.1 Vision

To build a culture of safety and resilience at all levels utilizing knowledge, innovation and education.

4.1.2 Goal

To have a well informed, prepared and organized human resource for disaster management.

4.1.3 Objective

A system of development of human resources required in the field of disaster management will be established and human resources that promote “self-help efforts,” “mutual-help efforts,” and “public-help efforts” will be developed with better coordination.

4.1.4 Time Frame

The time frame of the plan is for ten years from 2012 to 2022. Monitoring of the plan will be conducted by NDMA in the beginning and NIDM after it is functioning. It is recommended that the plan is reviewed in five years by NIDM in consultation with other relevant organizations and NIDM will be responsible for upgrading the plan at the time of review if necessary.

4.2 Strategies

In order to achieve the objective, the following strategies will be adopted for the next ten years.

4.2.1 Involvement of Various Organizations to Implement Capacity Building Activities of Stakeholder Groups with Good Coordination

Human resource development activities of stakeholder groups in the field of disaster management should be done by various organizations with better coordination among them. There are many stakeholder groups in disaster management as mentioned above and it is impossible for one organization to be responsible for capacity building of all stakeholder groups. It is necessary to divide and distribute human resource development activities into various organizations and to have the designated organizations reliably conduct human resource development activities for stakeholder groups for which they are responsible for capacity building. In order to avoid duplications and ensure each stakeholder group is trained, it is necessary to identify which organization will implement human resource development activities to which stakeholder group and share the information of activities among organizations that conduct human resource development activities.

4.2.2 Emphasis on Capacity Building of Main Stakeholder Groups

Main stakeholder groups that play more important roles to improve disaster management in Pakistan should receive greater emphasis than supporting stakeholder groups. Although it is very important that the capacity of each stakeholder group is enhanced step-by-step, the main stakeholder groups that directly boost disaster management situations in Pakistan should be more focused on. The disaster management system has just been introduced in Pakistan and the government is making efforts to build the foundations of the disaster management system at present. Therefore, it is necessary to build the capacity of the main stakeholder groups that play major roles in order to build the foundations of the Pakistani disaster management system.

4.2.3 Development of System of Accumulation and Sharing Research Results and Lessons Learnt in the Field of Disaster Management

It is necessary to build a system to collect and share lessons learnt and latest research results in the field of disaster management. If the contents of capacity building activities are out of date, the significance of the human resource development activities will weaken. Contents of human resource development activities should be in line with latest trends of disaster management of Pakistan and other countries and there needs to be a system so that any person who needs information related to disaster management can access such kinds of information easily for that purpose. There is no system in Pakistan to collect and share lessons learnt and latest research results in the field of disaster management and therefore, it is necessary to build a system. Establishing such a system could be meaningful not only for human resource development activities but also for improvement of disaster management practices.

4.2.4 Functionalization of NIDM as a Focal Organization of Human Resource Development in the Field of Disaster Management

A functioning NIDM is required to promote the activities mentioned above. Since there are many activities required for improvement of human resource development activities and there are many organizations involved in the activities, it is necessary to have an organization that leads and supervises overall activities. NIDM is expected to do this task. However, NIDM is still under development in terms of all aspects (staffing, budgeting, and building). It needs to become a functional NIDM as soon as possible.

4.3 Outputs and Activities

4.3.1 Outputs

In order to achieve the objective, the following five outputs are expected to be produced during the next ten years.

1. NIDM (National Institute of Disaster Management) takes initiative for improvement of human resources in the field of disaster management.
2. Capacity of governmental staff who are in charge of disaster management is enhanced.
3. Capacity of staff of government offices related to disaster management is enhanced for mainstreaming DRR activities for their implementation.
4. Capacity of communities is enhanced to cope with disasters.
5. Individuals are aware of importance of disaster management.

4.3.2 Activities for Outputs

In order to produce each output, some activities should be implemented. Here are the explanations of the activities for each output.

- 1) **NIDM (National Institute of Disaster Management) takes initiative for improvement of human resources in the field of disaster management.**

Activity

- | |
|--|
| <ol style="list-style-type: none">1-1 Setting up of organization of NIDM1-2 Construction of NIDM building1-3 Enhancements of coordination and partnerships with national and international organizations in the field of disaster management1-4 Systematization of DRM capacity building in various organizations1-5 Improvement of DRM training quality through technical advisories1-6 Establishment of library specialized for disaster management and Disaster Information Resource Center (DIRC)1-7 Promotion of research in the field of disaster management |
|--|

A functioning NIDM is needed. In order to functionalize NIDM, it is necessary to set up an organization as well as a facility. According to the National Disaster Management Act, 2010, NIDM “shall be responsible for planning and promoting training and research and developing core competencies in the area of disaster management, documentation and development of a national level information base relating to disaster management policies, prevention mechanisms and mitigation measures”. NIDM has been established based on this Act. However, functions of NIDM are still very limited. In order to promote overall human resource development activities in the field of disaster management, it is essential to functionalize NIDM as soon as possible.

After NIDM is functionalized, it is supposed to be a focal organization of human resource development activities in the field of disaster management. As a focal organization, NIDM will lead the following activities.

First of all, NIDM will lead coordination among organizations that conduct human resource development activities in the field of disaster management and assist these organizations to systematize the activities. It is necessary to establish a system that ensures that the necessary human resources for disaster management are developed. There are various stakeholder groups in the field of disaster management and capacities of these stakeholder groups should be surely enhanced to improve overall disaster management in Pakistan. However, since there are many stakeholder groups, it is difficult to train them by one organization. Rather, it is required to divide human resource development activities into several organizations and have each designated organization develops human resources systematically. Simultaneously, coordination among these organizations should be conducted to determine which human resource development activities are done by each of these individual organizations.

Overall human resource development activities should be supervised, coordinated and advised by NIDM. However, implementation of human resource development activities should be done by different organizations. The table below shows proposed implementation organizations of human resource development activities for each stakeholder group. The table was developed based on the roles and responsibilities of each organization and the current capacity for human resource development activities. These implementation organizations are responsible for implementation. However, it is not necessary to implement activities directly and it is expected that some activities are to be outsourced (to NGOs, universities, research institutes, etc.). It is recommended that the contents of the table be discussed and finalized among the organizations that conduct human resource development activities in the field of disaster management when coordination among these organizations matures. Then, implementation organizations should develop action plans for their own human resource development activities and implement the activities in coordination with other organizations. In order to ensure human resource development activities for each stakeholder, it is recommended that the implementation organizations institutionalize the activities as their regular activities. Each organization reports progresses of their activities and the progresses are shared among these implementation organizations for coordination, improvement and integration of the activities.

Table II.5 Proposed Implementation Organizations of Human Resource Development

Stakeholder Groups	Targets	Implementation Organization	Areas of Capacity Building (Areas of Competency)
Main Stakeholder Groups			
Individual	Adults and children	NIDM	General knowledge of all types of disasters, disaster management of all phases and emergency response skills (1, 3, 4, 6, 7, 9)
		F/G/S/PDMA	General knowledge of all types of disasters, disaster management of all phases and emergency response skills (1, 3, 4, 6, 7, 9)
		DDMA	General knowledge of all types of disasters, disaster management of all phases and emergency response skills (1, 3, 4, 6, 7, 9)
		TMA	General knowledge of all types of disasters, disaster management of all phases and emergency response skills (1, 3, 4, 6, 7, 9)
		NGO	General knowledge of all types of disasters, disaster management of all phases and emergency response skills (1, 3, 4, 6, 7, 9)
	Children	School	General knowledge of all types of disasters, disaster management of all phases and emergency response skills (1, 3, 4, 6, 7, 9)
Community	Community leaders and members	DDMA	General knowledge of all types of disasters, disaster management of all phases and emergency response skills (1, 3, 4, 6, 7, 9)
		TMA	General knowledge of all types of disasters, disaster management of all phases and emergency response skills (1, 3, 4, 6, 7, 9)
	Community rescue team members	District rescue team (Police, Civil Defense, Fire Brigade, Rescue 1122)	General knowledge of all types of disasters, disaster management, and search and rescue skills (1, 3, 6, 7, 8)
Disaster management authorities	Staff of NDMA	NIDM	General knowledge of all types of disasters, disaster management of all phases and emergency response skills (1, 3, 4, 6, 7, 9)
	Staff of F/G/S/PDMA	NIDM	General knowledge of all types of disasters, disaster management of all phases, emergency response skills and training skills (1, 3, 4, 6, 7, 9, 11)
	Staff of DDMA	NIDM	General knowledge of all types of disasters, disaster management of all phases, emergency response skills and training skills (1, 3, 4, 6, 7, 9, 11)
Line ministries/ departments	Staff of federal ministries/ agencies	NIDM	General knowledge of all types of disasters and disaster management of all phases (1, 3, 4, 6, 9)
		NSPP	General knowledge of all types of disasters and disaster management of all phases (1, 3, 4, 6, 9)
		Each ministry/ agency	Specific and technical knowledge of disaster management and emergency response skills required for each organization (5, 7, 10)
	Staff of provincial government	F/G/S/PDMA in each province	General knowledge of all types of disasters and disaster management of all phases (1, 3, 4, 6, 9)
		Staff Academy in each province	General knowledge of all types of disasters and disaster management of all phases (1, 3, 4, 6, 9)
		Each provincial government	Specific and technical knowledge of disaster management and emergency response skills required for each organization (4, 7, 10)
	Staff of schools, colleges and universities	F/G/S/PDMA in each province	General knowledge of all types of disasters, disaster management of all phases and emergency response skills (1, 3, 4, 6, 7, 9)
		Education department in each province	General knowledge of all types of disasters, disaster management of all phases and emergency response skills (1, 3, 4, 6, 7, 9)
	Teachers	Education department in each province	General knowledge of all types of disasters, disaster management and training skills (1, 3, 4, 6, 7, 11)
	Staff of health units	Medical universities	General knowledge of all types of disasters, disaster management of mitigation and preparedness and emergency response, emergency response skills and first aid skills (1, 3, 4, 6, 7, 8)

Stakeholder Groups	Targets	Implementation Organization	Areas of Capacity Building (Areas of Competency)
		Medical and health institutes	General knowledge of all types of disasters, disaster management of mitigation and preparedness and emergency response, emergency response skills and first aid skills (1, 3, 4, 6, 7, 8)
	Staff of district governments	DDMA	General knowledge of all types of disasters, disaster management of all phases and emergency response skills (1, 3, 4, 6, 7, 9)
		Staff academy in each province	General knowledge of all types of disasters, disaster management of all phases (1, 3, 4, 6, 9)
		Each provincial government	Specific and technical knowledge of disaster management required for each organization (4, 10)
Search and rescue team	Staff of federal rescue team	Each rescue team (Army, Police, Civil Defense)	General knowledge of all types of disasters and disaster management and search and rescue skills (1, 2, 3, 6, 7, 8)
	Staff of provincial rescue team	Each rescue team (Police, Civil Defense, Fire Brigade, Rescue 1122)	General knowledge of all types of disasters and disaster management and search and rescue skills (1, 2, 3, 6, 7, 8)
	Staff of district rescue team	Provincial rescue team (Police, Civil Defense, Fire Brigade, Rescue 1122)	General knowledge of all types of disasters, disaster management, search and rescue skills and training skills (1, 3, 6, 7, 8, 11)
Local governments	Staff of TMA	DDMA	General knowledge of all types of disasters, disaster management of all phases and emergency response skills (1, 3, 4, 6, 7, 9)
	Staff of TMA	TMA	General knowledge of all types of disasters, disaster management of all phases and emergency response skills (1, 3, 4, 6, 7, 9)
	Staff of TMA	Local government academy in each province	General knowledge of all types of disasters, disaster management of all phases (1, 3, 4, 6, 9)
Supporting Stakeholder Groups			
Research institutes/ universities	Researchers and students	Each research institute/ university	General and technical knowledge of all types of disasters and disaster management and training skills (1, 2, 3, 4, 5, 9, 10, 11)
Private company	Staff	Each private company	General knowledge of all types of disasters and disaster management (1, 3, 4, 9) Specific and technical knowledge of disaster management required for each organization (2, 5, 6, 10)
Private company	Staff	NIDM	General knowledge of all types of disasters and disaster management (1, 3, 4, 9)
Media	Staff	Each media company	General knowledge of all types of disasters, disaster management of all phases and emergency response skills (1, 3, 4, 6, 7, 9)
Media	Staff	NIDM	General knowledge of all types of disasters and disaster management (1, 3, 4, 9)
Media	Staff	Ministry of Information and Broadcasting	General knowledge of all types of disasters and disaster management (1, 3, 4, 9)
NGO	Staff	Each NGO	General knowledge of all types of disasters, disaster management of all phases, emergency response skills and training skills (1, 3, 4, 6, 7, 9, 11) Specific and technical knowledge of disaster management and rescue and first aid skills required for each organization (2, 5, 8, 10)
NGO	Staff	NIDM	General knowledge of all types of disasters, disaster management of all phases, emergency response skills and training skills (1, 3, 4, 6, 7, 9, 11)

Note : Areas of Competency, 1) General knowledge of disasters, 2) Specific and technical knowledge of disasters, 3) General knowledge of disaster management, 4) General knowledge of mitigation and preparedness, 5) Specific and technical knowledge and skills in mitigation and preparedness, 6) General knowledge of emergency response, 7) Skills in emergency response, 8) Skills in rescue and first aid for emergency response, 9) General knowledge of recovery and reconstruction, 10) Specific and technical knowledge and skills in recovery and reconstruction, 11) Training skills for disaster management

NIDM will provide technical advisories and assistance to the organizations that conduct capacity building in the area of disaster management. Through the coordination mentioned above, training materials used by these implementation organizations are to be collected and analyzed. Good practices are shared. On the other hand, less qualified contents should be improved. Furthermore, when these implementation organizations implement new capacity building activities, they will consult NIDM about the activities.

In addition to coordination inside Pakistan, NIDM will coordinate with international organizations related to disaster management for various partnerships such as exchange of scholars and sharing latest research results.

Second, NIDM will establish a library specialized for disaster management and Disaster Information Resource Center (DIRC) for promotion of capacity building activities as well as for creation of a research environment. The latest research results from national and international organizations will be collected and shared through the library and the center. Research in the field of disaster management will also be promoted by NIDM by awarding fellowships to specified study areas.

2) Capacity of governmental staff who are in charge of disaster management is enhanced.

Activity

- | |
|--|
| 2-1 Implementation of DRM training courses for NDMA, F/G/S/PDMAs, and DDMA staff |
| 2-2 Capacity enhancement of urban search and rescue teams |
| 2-3 Implementation of regular refresher training for district fire brigades |
| 2-4 Implementation of DRM workshops for TMA staff |

Strengthening “Public-help Efforts” is very important because “Public-help Efforts” will promote “Self-help Efforts” and “Mutual-help Efforts” in the future. The capacity of those who are in the position to promote “Public-help Efforts” should be enhanced as the first priority.

In order to enhance the disaster management system in Pakistan, staff of disaster management authorities from national to district level (NDMA, F/G/S/PDMA, and DDMA) should be strengthened first. Disaster management authorities at national, provincial and district levels are focal organizations of promotion of disaster management at each level. It is expected that these organizations will coordinate with line ministries and departments as well as other related organizations to implement DRR measures, both structural and non-structural. They are also expected to strengthen the capacity of major stakeholder groups. In the emergency and rehabilitation phases, they lead coordination among related organizations to implement actual activities. However, these organizations are still new and under development. It is required that the capacity of the staff of these organizations be systematically enhanced soon.

Considering their tasks, staff of these organizations (NDMA, F/G/S/PDMAs, and DDMA) should have general knowledge of disasters and disaster management. It is not necessary, however, that they have detailed technical knowledge of disasters and disaster management. In addition, they need to develop capacity to deal with emergency situations (setting up of emergency headquarters, camp management, damage assessment, relief management, etc.). As a result, the following training courses are expected to be developed and provided.

- Disaster Risk Management (Disasters in Pakistan, Overview of Disaster Risk Management)
- Mitigation and Preparedness (Laws, Policies and Plans for Disaster Management, Mainstreaming DRR into Development, Hazard Assessment and Risk Analyses, Various Mitigation Measures)
- Emergency Response (Humanitarian Relief Management, Simulation of Emergency Response)

Since required tasks and capacities are different at each level, capacity development programs should be made for each level. These programs should be implemented on a regular basis so that newly transferred staff can have a chance to take part in the programs as well as other staff will have a chance to refresh their knowledge and skills.

Capacity of emergency response is critical at the time of emergency and it should be strengthened. Especially, search and rescue teams in urban cities and districts should be strengthened first because they are the people who go to disaster sites immediately in an emergency. It is also expected that enhancement of capacity of these people will promote human resource development of other people such as community leaders and school teachers in this field.

Urban search and rescue teams are still not matured in Pakistan and they should be strengthened. Along with rapid urbanization, disasters sometimes occur in the centers of cities. Since search and rescue in cities requires different skills than search and rescue in rural areas, it is recognized that search and rescue teams in cities should be strengthened. As a result, Urban Search and Rescue (USAR) teams have been established by NDMA for Capital Development Authority, Islamabad and City District Government Karachi. Team members have been trained and been ready to play their critical roles in life saving activities from collapsed structures. In addition, Army USAR team has also been trained in accordance with international standards. Because it is important to train the team members continuously both for maintaining their capacities as well as up-scaling them, the activity should be continued for the next ten years.

Search and rescue teams at the district level should also be strengthened because they are responsible for search and rescue in rural areas. Search and rescue activities at the initial phase of an emergency are very important to save human lives. In other words, it is critical how quickly and properly district rescue teams can act in the time of an emergency, which relies on how well

they are trained. However, it cannot be said that all district rescue teams are well trained due to lack of adequate attention in this area except for Rescue 1122 in Punjab. It is necessary to set up a system to provide refresher training to existing staff of rescue teams (fire brigades, Civil Defense e, police, etc.) at district level. The refresher training does not need to be a large-scale. Rather, it is important that the refresher training will be provided continuously. Therefore, it is needed to make the refresher training provided regularly at districts.

It is very critical that TMA staff is well prepared for disasters because they are the closest government officials to disasters. TMA staff will be the first responder to a disaster. At the time of emergency, in close coordination with DDMA's and district search and rescue teams, TMAs disseminate early warnings, start search and rescue within their capacities and assess damages to report to district to get proper support. Because the first few hours after a disaster are critical moments, what actions TMA staff will take at the beginning of a disaster influence the extent of damages. It is necessary that TMA staff can respond properly at the time of disaster.

The capacity building program for TMA staff should be simple and should be reliably provided with all necessary TMA staff. It is not necessary for TMA staff to know specific technical things related to disaster management. Knowledge and skills that TMA staff should know and accommodate should be clarified and content of capacity building program should be focused on the knowledge and skills. Then it is necessary to examine a measure that the capacity building program will cover all necessary TMA staff because there are a huge number of TMA staff members in Pakistan. Considering transfers of TMA staff, it is better to provide the capacity building program regularly.

3) Capacity of staff of government offices related to disaster management is enhanced for mainstreaming DRR activities into their planning, design and implementation stages.

Activity

- | |
|---|
| <ul style="list-style-type: none">3-1 Implementation of DRM workshops for relevant ministries3-2 Implementation of DRM workshops for relevant departments of provincial governments3-3 Implementation of DRM workshops for district governments3-4 Incorporation of DRM subjects into the curriculum of government training institutes |
|---|

It is essential to enhance the capacity of the staff of line ministries and departments from federal to district levels to reduce disaster risks. Implementation of mitigation measures and preparation for emergency response are basically the responsibility of line ministries and departments. Actual activities for emergency response during disasters and rehabilitation after disasters are also conducted by line ministries and departments. If line ministries and departments do not understand the importance of measures to reduce disaster risks, actual implementation of these

measures can not be conducted at all. Therefore, it is necessary that the capacity of staff of line ministries and departments be increased so that necessary measures are properly implemented.

Capacity building of the staff of line ministries and departments is conducted in two ways: one is by short-term workshops and the other is through periodic regular staff training at governmental staff academies. In order to start implementation of DRR measures by line ministries and departments as soon as possible, it is necessary to start capacity building activities for them as soon as possible. Therefore, short-term workshops on DRM should be conducted immediately. At the same time, necessary activities to incorporate DRM subjects into regular curriculum of staff academies for governmental officers should be started so that governmental officers can take classes of DRM subjects through regular capacity building program at the staff academies in the future.

4) Capacity of communities is enhanced to cope with disasters.

Activity

4-1 Implementation of DRM workshops for community leaders

4-2 Search and rescue training for members of community emergency response teams

Capacities of communities to cope with disasters are critical in case of emergency considering the limitation of public-help efforts (governmental efforts in disaster management). Communities should survive by themselves until governmental help reaches them. Therefore, communities should have capacities to deal with disasters and disaster damages by themselves within their resources.

The first step to strengthen communities against disasters is to make awareness of community leaders, which can be enhanced through capacity building programs. There are various measures that can be taken by communities to mitigate disaster risks and increase preparedness. For instance, evacuation routes can be established and necessary stocks will be kept by communities. However, if community leaders are not aware of the importance of this, no actions can be taken for the purpose. Therefore, it is important to get community leaders aware of the importance of disaster management and contents of capacity building program should be concentrated on the topics first.

Awareness of community leaders should be conducted continuously to cover as many people as possible from communities in Pakistan. That can be done both by the governments as well as the civil society (i.e. NGOs).

In addition to capacity building of community leaders, search and rescue capacities should be strengthened at the community level. Communities can start search and rescue activities before the district rescue teams come if communities have the necessary skills. However, most of the

communities do not have the capacity for engaging in search and rescue operations by themselves because it is a new concept in Pakistan and only a few community emergency response teams have been set up as of this writing. Therefore, in terms of capacity building of community rescue teams, specification of their roles and development of necessary training courses are needed first. Utilizing the experience from existing community emergency response teams, the roles of community rescue teams should be examined and set. Then, a system for training community rescue teams should be examined. It is necessary that the training for community rescue teams should be implemented regularly and continuously.

5) Individuals are aware of the importance of disaster management.

Activity

- | |
|---|
| 5-1 Implementation of awareness campaigns to the general public |
| 5-2 Promotion of disaster education at schools |
| 5-3 Promotion of disaster education in higher education |

How well each individual is well prepared for disasters and how each individual behaves at disasters will influence the overall damage at the time of disasters. In order to make a society resilient to disasters, it is essential to strengthen each individual in terms of disaster management.

Raise the awareness of each individual should be implemented tirelessly and should try to cover as many individuals as possible. Awareness will be implemented in two ways: one is to conduct awareness campaign at several levels and the other is that disaster education will be taught in schools. Continuous awareness campaigns are needed from national to Tehsil levels. Each awareness campaign does not need to be big. Rather, it is important to conduct the campaign continuously and regularly so that it will remind each individual of the importance of disaster management repeatedly. Therefore, it is recommended that awareness campaign be systematized as regular governmental activities at each level.

Simultaneously, it is necessary that disaster education is reliably taught in schools. Disaster education has already been incorporated into national curriculum. However, it is not taught in schools yet. Therefore, activities which promote implementation of disaster and disaster management education in schools should be conducted. It is essential that disaster and disaster management education is taught in schools so as to cover as many individuals as possible.

In addition, disaster and disaster management education should definitely be surely included in higher education. It is effective to educate university students about disasters and disaster management for two major reasons. One is that university students start working in various areas after they graduate and they are expected to consider disaster management in many aspects of their work if they have some knowledge about disaster management. The other is that some of

university students continue their research after they finish their degrees and some of them would select disaster management related topics for their research if they are exposed to the ideas regarding disaster management while they study in the universities. Therefore, it should be considered to include disaster education at the higher education level.

4.4 Implementation Schedule

The table below shows the implementation schedule and estimated cost (in US dollars) of each activity.

Table II.6 Implementation Schedule and Estimated Cost

Output	Activity	Responsible Organization	Cost in thousands USD*	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
1. NIDM takes initiatives for improvement of human resources in the field of disaster management.	1-1 Setting up of organisation of NIDM	NDMA	-										
	1-2 Construction of NIDM	NDMA	20,200										
	1-3 Enhancement of coordination and partnership	NIDM	30										
	1-4 Systematisation of DRM capacity building	Relevant organizations	-										
	1-5 Improvement of DRM training quality	NIDM	-										
	1-6 Establishment of library	NIDM	110										
	1-7 Promotion of research	NIDM	380										
2. Capacity of governmental staff who is in charge of disaster management is enhanced.	2-1 DRM courses for NDMA, PDMA, and DDMA staff	NIDM	1,290										
	2-2 Capacity enhancement of urban search and rescue teams	City District Governments	2,320										
	2-3 Implementation of regular refresher training for district fire brigades	Provincial Firebrigade, Provincial Civil Defence	4,360										
	2-4 DRM workshops for TMA staff.	NIDM, DDMA	4,470										
3. Capacity of staff of government offices related to disaster management is enhanced for mainstreaming DRR activities into their implementation.	3-1 DRM workshops for relevant ministries	NIDM	170										
	3-2 DRM workshops for relevant departments of provincial governments.	PDMA	130										
	3-3 DRM workshops for district governments.	DDMA	2,180										
	3-4 DRM subjects into curriculum of government training institutes	NIDM	110										
4. Capacity of communities is enhanced to cope with disasters.	4-1 DRM workshops for community leaders.	DDMA, NGO	13,080										
	4-2 Search and rescue training for members of community emergency response teams.	District Firebrigade, District Civil Defence, NGO	13,080										
5. Individuals are aware of importance of disaster management.	5-1 Awareness campaigns	NIDM, PDMA, DDMA, TMA	940										
	5-2 Promotion of disaster education at schools	NIDM, Provincial Education Department	180										
	5-3 Promotion of disaster education in higher education	NIDM, Provincial Education Department	750										

* Excluding recurrent costs

The estimated total cost for HRD activities is approximately USD 64.28 million (PKR 5.68 trillion, USD1=PKR88.4) including the cost for the construction of the NIDM building. The cost breakdown and sub-activities of each main activity as listed above are shown in Appendix 3.

PART III
NIDM OPERATION PLAN

PART III NIDM OPERATION PLAN

CHAPTER 5 Roles and Responsibilities of NIDM in Human Resource Development

5.1 Roles and Responsibilities of NIDM from the Act

The National Disaster Management Act, published in 2010, stipulates the responsibilities of NIDM as follows.

NIDM “shall be responsible for planning and promoting training and research and developing core competencies in the area of disaster management, documentation and development of national level information base relating to disaster management policies, prevention mechanisms and mitigation measures.” (NDMA, 2010, CHAPTER VII, 26, (2))

In order to discharge its functions, NIDM is expected to do traoninh pwmer

- To develop training modules, undertake research and documentation in disaster management and organize training programs
- To formulate and implement a comprehensive human resource development plan covering all aspects of disaster management
- To provide assistance in national level policy formulation
- To provide required assistance to the training and research institutes for development of training and research programs for stakeholders including government functionaries
- To provide assistance to the provincial governments in the formulation of provincial level policies, strategies, disaster management framework and any other assistance as may be required by the provincial governments for capacity-building of stakeholders, government including its functionaries, civil society members, corporate sector and people’s elected representatives
- To develop educational materials for disaster management including academic and professional courses
- To promote awareness among stakeholders including college or school teachers and students, technical personnel and others associated with multi-hazard mitigation, preparedness and response measures
- To do all such other lawful things as are conducive or incidental to the attainment of the above objects
- To undertake any other function as may be assigned to it by the federal government

The activities above can be categorized into four categories: they are “Training, Education and Awareness,” “Promotion of Comprehensive Human Resource Development for Disaster Management,” “Research,” and “Advice for Policy Formulation”.

Training, Education and Awareness

- Develop training modules and organize training programs
- Develop educational materials for disaster management
- Promote awareness

Promotion of Comprehensive Human Resource Development for Disaster Management

- Formulate and implement a comprehensive human resource development plan
- Provide required assistance to the training institutes for development of training programs
- Provide assistance as may be required by the provincial governments for capacity building

Research

- Undertake research and documentation in disaster management
- Provide required assistance to the research institutes for development of research programs

Advice for Policy Formulation

- Provide assistance in national level policy formulation
- Provide assistance to the provincial governments in the formulation of provincial level policies, strategies, and disaster management framework

CHAPTER 6 Existing Conditions

In this chapter, existing conditions of human resource development done by NDMA and NIDM are described¹. As mentioned above, expected roles of NIDM from the Ordinance are “Training, Education and Awareness,” “Promotion of Comprehensive Human Resource Development for Disaster Management,” “Research”, and “Advice for Policy Formulation”. However, current major activities for human resource development are basically limited to “training, education and awareness”. The kinds of activities to be conducted for training, education and awareness before and after the establishment of NIDM are mentioned. In addition, existing conditions of NIDM are described.

6.1 Before Establishment of NIDM

6.1.1 Training and Education

NDMA has provided many training courses since 2007. The most significant training course is “Disaster Risk Management (DRM)” training, which is supported by the United Nations Development Program (UNDP). The training has been provided to selected provincial government officials and district government officials, mainly F/G/S/PDMA staff and DDMA staff, of most of the provinces and districts. The training also targets staff of NGOs. The contents of the training are basically composed of “introduction to disaster risk management,” “disaster risk assessment,” “disaster risk management: operational areas,” “disaster risk management planning at district level,” and “emergency response management.”

Another major training course conducted for federal government officials since 2008 is “Mainstreaming Disaster Risk Reduction into Development.” This training was provided to members of the National and Ministerial Working Group², officials of the Ministry of Housing and Works, and officials of the Ministry of Industries and Production, from 2008 to 2009.

In addition to the above training courses, NDMA and NIDM have provided the following training courses. Most of the training courses were implemented just one time for specific participants in 2009 under certain programs.

1) For local government officials (limited to the selected)

- Earthquake vulnerability reduction and role of municipal governments
- Land use planning

¹ NIDM was officially established in February 2010. Before that, NDMA conducted activities which are to be done by NIDM. The activities done by NDMA are included here.

² Members of National Working Group on Disaster Risk Reduction were 1) Ministry of Planning and Development (Planning Commission), 2) Ministry of Industries and Production, 3) Ministry of Food and Agriculture, 4) Ministry of Housing and Works, 5) Ministry of Water and Power, 6) Ministry of Communication, 7) Ministry of Environment, 8) Ministry of Education, 9) Ministry of Defense, and 10) Ministry of Health.

- Emergency response
 - Flood/cyclone mitigation and preparedness
 - Earthquake mitigation
 - Disaster management for women
- 2) For citizens (limited to the selected)**
- Community training, awareness and mobilization sessions in flood/cyclone mitigation and preparedness
 - Tsunami and coastal hazard preparedness for community volunteers and children
 - Coastal hazard preparedness for university students
 - Early warning system training for volunteers
 - Training on hazard, vulnerability and capacity assessment for volunteers
- 3) For private sector (limited to the selected)**
- Earthquake safer construction techniques for masons
 - Earthquake safer construction and retrofitting techniques for engineers
- 4) For media staff (limited to the selected)**
- Disaster reporting
 - Tsunami warning dissemination through media
- 5) For university students (limited to the selected)**
- Coastal hazard preparedness
- 6) For people engaged in early warning systems**
- Development of standard operating procedures for end-to-end tsunami early warning systems
 - Developing capacities for tsunami decision support systems
 - Tsunami warning dissemination through media
 - Tsunami simulation and inundation modeling
- 7) For people engaged in mitigation against earthquakes**
- Consultative workshop on earthquake risk scenarios and action planning
 - Regional workshop on structural and non-structural solutions for earthquake risk reduction
 - Orientation workshop on retrofitting techniques, design and methodology
 - Workshop on operational guidelines for municipal disaster management cells
 - Workshop on land use planning for earthquake risk reduction and preparedness
- 8) For master trainers**
- Basic principles of earthquake resistant construction

- Seismic vulnerability assessment of buildings
- Communication, presentation, group dynamics and facilitation skills
- Development of project proposals

Besides the above-mentioned training courses, NDMA has sent government officials (staff of NDMA, F/G/S/PDMAs, and GSP) to foreign countries for short-term training courses to enhance their professional capacities related to disaster management.

Furthermore, NDMA conducted evacuation drills for tsunami preparedness in coastal areas (Jewni, Ormara, and Pasni in Balochistan) where communities are vulnerable to coastal hazards. The drills involved more than 5,000 people, which consisted of district government officials, response agencies, and citizens including women, children and the elderly.

NDMA also provides consultations and support to education about disasters in educational institutions. For example, NDMA provided consultations to the erstwhile Ministry of Education for mainstreaming DRM in school curricula. At the Civil Services Academy (CSA), emergency response simulations were conducted in 2008 and 2009. Furthermore, NDMA held a workshop on DRM at the National School of Public Policy (NSPP), where senior civil servants receive training.

Finally, NDMA is engaged in capacity building for disaster preparedness and response. NDMA has established the Urban Search and Rescue (USAR) system in Karachi and Islamabad as well as under Army and trained personnel for the USAR teams. Also, Community Rapid Response teams were established in four districts and members of the teams were trained for search and rescue works.

6.1.2 Awareness

In order to raise public awareness, NDMA held Disaster Management Exhibition and Conferences (DMEC) in 2008 and 2009. They were organized around the National Disaster Awareness Day, which was observed on 8 October. The conferences were inaugurated by the Prime Minister and became forums where various stakeholders gathered and discussed disaster management widely. The exhibitions provided opportunities to various stakeholders to see the latest products, equipment and machines such as ambulances and fire fighting equipment that are utilized at different stages of disaster management. The exhibitions also would be places where public and private organizations can meet and discuss further cooperation and collaborations.

6.2 After Establishment of NIDM

Establishment of NIDM was determined by the National Disaster Management Act (NDMA), and NIDM was actually established in February 2010. NIDM has just started its activities and is under development. Currently, it does not have its own building and uses two rooms (one as a

training hall and the other as an office) of the UNDP compound. NIDM is an affiliate organization of NDMA and works closely with NDMA. In reality, no governmental officers have been assigned to NIDM yet. Instead, one officer funded by UNDP has worked for NIDM as Director³ and most of the activities of NIDM are supported by UNDP for the time being.

Since its establishment, NIDM has implemented its activities, which are described below. It should be noted, however, that NDMA itself also continues implementation of various human resource development activities such as community awareness raising, workshops on mainstreaming DRR into development and search and rescue trainings under several programs.

6.2.1 Year 2010

The major activity of NIDM since its establishment has been to provide training courses. In 2010, NIDM conducted training courses as shown in the table below. Training venues are various from Islamabad to Quetta. NIDM uses its training hall as well as private hotels for trainings in Islamabad. In other cities, NIDM usually uses private hotels as training venues.

Table III.1 List of Training Courses in 2010

	Course Name	Target	Duration	Timing	Venue	# of Participants
1	Flood Mitigation	Government officials, NGO staff	5 days	February	Islamabad	23
2	Earthquake Mitigation	Government officials, NGO staff	5 days	March	Islamabad	19
3	Disaster Risk Management for Sindh	Government officials, NGO staff	5 days	March	Karachi	30
4	Cyclone Mitigation	Government officials, NGO staff	5 days	April	Karachi	34
5	Disaster Reporting	Media	3 days	July	Islamabad	25
6	Disaster Reporting	Media	3 days	July	Islamabad	26
7	Disaster Risk Management for KP/FATA	Government officials, NGO staff	5 days	November	Peshawar	41
8	Disaster Risk Management for Balochistan	Government officials, NGO staff	5 days	November	Quetta	43
9	Disaster Risk Management for Punjab	Government officials, NGO staff	5 days	December	Lahore	46

Trainers for each training course come from different organizations such as universities, governments, UN agencies, and civil society. Training materials are developed mainly by national private consultants under supervision of NIDM. NIDM developed the following training materials by the end of 2010.

- Handbook on Disaster Risk Management (English)
- Handbook on Disaster Reporting (English/ Urdu)
- Training Manual on Flood Mitigation (Urdu)
- Training Manual on Cyclone Mitigation (Urdu)

³ Since the resignation of the former director in September 2011, the position has remained vacant. The employment process for the position is on-going.

- Training Manual on Community Based Disaster Risk Management (English)
- Trainer Manual on Community Based Disaster Risk Management
- Training Manual on Disaster Risk Management (English)

6.2.2 Year 2011

The major activity of NIDM in 2011 was the continuation of training courses. In addition to “Disaster Risk Management” training courses for provincial government officials, training courses on “disaster risk management to university students” at Hazara University, Punjab University, Islamia University Bahawalpur, Baluchistan University, NED Karachi University, and AJ&K University, “green recovery and reconstruction,” “disaster risk management for women,” “drought mitigation” and “earthquake mitigation” were implemented.

A 2-day Disaster Management Exhibition was also organized in Peshawar in April in collaboration with the Center for Disaster Preparedness and Management (CDPM), University of Peshawar.

Additionally, NIDM eagerly seeks international collaboration. NIDM started discussions with the “Center for Excellence in the Disaster Management” in Hawaii, the “Asian Disaster Preparedness Center (ADPC)” in Bangkok, and the “Pacific Disaster Center (PDC)” in Hawaii, “National Weather Center, University of Oklahoma”, “International Center for Integrated Mountain Development (ICIMOD)” in Nepal, “UNESCO”, “International Recovery Platform (IRP)”, “UNISDR,” and the “International Center for Water Hazard Risk Management (ICHARM)” in Japan, for example. Some collaboration has already materialized: for instance, the “green recovery and reconstruction” training courses mentioned above were funded by the World Wide Fund (WWF).

Furthermore, NIDM is making efforts to start awarding fellowships to researchers who research certain areas of disaster risk management on a small scale.

CHAPTER 7 Gaps and Issues

7.1 Review of Comprehensive Human Resource Development Plan

7.1.1 Summary of Comprehensive Human Resource Development Plan

Activities of NIDM should be in line with the comprehensive human resource development plan. The comprehensive human resource development plan indicates the direction of human resource development in the field of disaster management for the next ten years. It shows what should be done to produce necessary human resources for the next ten years. The table below shows a summary of the comprehensive human resource development plan (2012-2022).

Table III.2 Summary of the Comprehensive Human Resource Development Plan

Vision	To build a culture of safety and resilience at all levels utilizing knowledge, innovation and education		
Goal	To improve preparedness against disasters and disaster damages		
Objective	System of development of human resources required in the field of disaster management will be established and human resources which promote “self-help efforts,” “mutual-help efforts,” and “public-help efforts” will be developed with better coordination.		
Time Frame	2012 – 2022 (10 years)		
Outputs and Activities		Activities	
	1. NIDM takes the initiative for improvement of human resources in the field of disaster management.	Outputs	1-1 Setting up of organization of NIDM
			1-2 Construction of NIDM building
			1-3 Enhancement of coordination and partnerships with national and international organizations in the field of disaster management
			1-4 Systematization of DRM capacity building in various organizations
			1-5 Improvement of DRM training quality through technical advisories
			1-6 Establishment of library specialized for disaster management and Disaster Information Resource Center (DIRC)
			1-7 Promotion of research in the field of disaster management
	2. Capacity of governmental staff who are in charge of disaster management is enhanced.		2-1 Implementation of DRM training courses for NDMA, F/G/S/PDMAs, and DDMA's staff
			2-2 Capacity enhancement of urban search and rescue teams
			2-3 Implementation of regular refresher training for district fire brigades
			2-4 Implementation of DRM workshops for TMA staff
	3. Capacity of staff of government offices related to disaster management is enhanced for mainstreaming DRR activities for their planning, design and implementation stages.		3-1 Implementation of DRM workshops for relevant ministries
			3-2 Implementation of DRM workshops for relevant departments of provincial governments
			3-3 Implementation of DRM workshops for district governments
			3-4 Incorporation of DRM subjects into curriculum of government training institutes
	4. Capacity of communities is enhanced to cope with disasters.		4-1 Implementation of DRM workshops for community leaders
		4-2 Search and rescue training for members of community emergency response teams	
5. Individuals are aware of importance of DRM.		5-1 Implementation of awareness campaigns to the general public	
		5-2 Promotion of disaster education at schools	
		5-3 Promotion of disaster education in higher education	

7.1.2 Roles of NIDM under Comprehensive Human Resource Development Plan

NIDM, as a focal organization of human resource development in the field of disaster management in Pakistan, is expected to be responsible for execution of many activities of the comprehensive human resource development plan. The following are the activities that NIDM is expected to be responsible for (Ref: Table III.2).

- 1-3 Enhancements of coordination and partnerships with national and international organizations in the field of disaster management
- 1-5 Improvement of DRM training quality through technical advisories
- 1-6 Establishment of a library specialized for disaster management and Disaster Information Resource Center (DIRC)
- 1-7 Promotion of research in the field of disaster management
- 2-1 Implementation of DRM training courses for NDMA, F/G/S/PDMAs and DDMA staff
- 2-4 Implementation of DRM workshops for TMA staff
- 3-1 Implementation of DRM workshops for relevant ministries
- 3-4 Incorporation of DRM subjects into curriculum of government training institutes
- 5-1 Implementation of awareness campaigns to the general public
- 5-2 Promotion of disaster education at schools
- 5-3 Promotion of disaster education in higher education

7.2 Gaps and Issues

NIDM is not able to conduct all expected activities at present since it just started its activities and it is still under development. Functions that are expected to be played by NIDM are defined in the National Disaster Management Act 2010. Only a few of these activities are conducted by NIDM at this moment. In addition, the comprehensive human resource development plan expects NIDM to be a focal organization of overall human resource development in the field of disaster management in Pakistan and gives a lot of roles to NIDM, most of which have not yet been enacted. In order that NIDM will play its expected functions and roles within the next ten years, NIDM should fill the following gaps and overcome the following issues.

7.2.1 Gaps

NIDM plays only a small part of expected functions at present. The National Disaster Management Act 2010 defines four major functions of NIDM as “Training, Education and Awareness,” “Promotion of Comprehensive Human Resource Development of Disaster

Management,” “Research”, and “Advice for Policy Formulation”. Current NIDM activities are mainly for “Training, Education and Awareness” among these four functions and there are few activities for the other three functions.

Activities to promote awareness, which are part of the activities of “Training, Education and Awareness”, are not yet frequently conducted by NIDM. Activities to develop training modules and organize training programs and to develop educational materials for disaster management are being implemented. For example, NIDM developed training modules and conducted training courses for DDMA staff. On the other hand, NIDM has not conducted specific activities to promote awareness other than an exhibition after its establishment. At present, NIDM has not yet implemented all expected activities even under “Training, Education and Awareness”.

Table III.3 Current Status of Expected Functions

Expected Functions by the Act	Current Status
“Training, Education and Awareness” <ul style="list-style-type: none"> • Develop training modules and organize training programs • Develop educational materials for disaster management • Promote awareness 	Development of training modules has been started and training programs have been imparted. Some educational materials for disaster management have been developed. A Disaster Management Exhibition was organized.
“Promotion of Comprehensive Human Resource Development for Disaster Management” <ul style="list-style-type: none"> • Formulate and implement a comprehensive human resource development plan • Provide required assistance to the training institutes for development of training programs • Provide assistance as may be required by the Provincial Governments for capacity-building 	NIDM started seeking international collaboration.
“Research” <ul style="list-style-type: none"> • Undertake research and documentation in disaster management • Provide required assistance to the research institutes for development of research programs 	There is a plan for awarding small-scale fellowships.
“Advice for Policy Formulation” <ul style="list-style-type: none"> • Provide assistance in national level policy formulation • Provide assistance to the Provincial Governments in the formulation of Provincial level policies, strategies, disaster management framework 	No activities in particular

Most of the activities which NIDM are expected to be responsible for in comprehensive human resource development plan are currently not conducted by NIDM. The comprehensive human resource development plan is an upper level plan of this NIDM operation plan and it is necessary for the NIDM operation plan to follow the comprehensive human resource development plan. Activities which are expected to be implemented by NIDM are listed in Section 3.1.2: they include, 1-3, 1-5, 1-6, 1-7, 2-1, 2-4, 3-1, 3-4, 5-1, 5-2, and 5-3. Most of these activities, except for 1-5, 2-4, and 3-4, have been partly started, depending on the availability of external funds. It is necessary for NIDM to at least continue these activities and to expand them as well as to start new activities in order to fulfill its roles in the comprehensive human resource development plan.

Table III.4 Current Status of Activities Expected to be Implemented by NIDM under the Comprehensive Human Resource Development Plan

Activities expected to be implemented by NIDM		Current Status
1-3	Enhancement of coordination and partnerships with national and international organizations in the field of disaster management	Partnering national and international organizations has been started.
1-5	Improvement of DRM training quality through technical advisories	No activities in particular
1-6	Establishment of a library specialized for disaster management and DIRC	NIDM does not have a library yet, although NDMA has a small library.
1-7	Promotion of research in the field of disaster management	NIDM has tried to start awarding fellowships in a very limited scale.
2-1	Implementation of DRM training courses for NDMA, F/G/S/PDMAs and DDMA staff	Several training courses have been conducted for F/G/S/PDMA and DDMA staff.
2-4	Implementation of DRM workshops for TMA staff	No activities in particular
3-1	Implementation of DRM workshops for relevant ministries	Some workshops have been conducted to staff of relevant ministries.
3-4	Incorporation of DRM subjects into the curriculum of government training institutes	Some workshops have been conducted to staff of NSPP (by NDMA).
5-1	Implementation of awareness campaigns to the general public	Some awareness campaigns are implemented.
5-2	Promotion of disaster education at schools	Themes related to disaster management are incorporated into national curriculum. However, they have not been implemented at school level yet.
5-3	Promotion of disaster education in higher education	NIDM has started providing DRM workshops at several universities at a pilot scale.

7.2.2 Issues

1) Necessity of institutional building of NIDM

Although NIDM has started its activities, it does not have sufficient institutional capacity, which is the major reason for the issues mentioned above. In order to enhance human resource development in the field of disaster management, it is essential to strengthen NIDM as an organization since NIDM will be a focal organization for human resource development in the field of disaster management.

2) Activities are limited to “training, education and awareness.”

As it is mentioned in the existing conditions, NIDM has just started its activities and still focuses on the activities of “training, education and awareness.” However, the Act as well as the comprehensive human resource development plan, expect NIDM to do more activities to improve overall human resource development in the field of disaster management. It is expected that NIDM will start activities in addition to the activities of “training, education and awareness” in the near future.

3) Necessity to set targets of “training, education and awareness” more clearly

NDMA and NIDM have conducted many training, education and awareness programs as mentioned above. However, it cannot be said that the training, education and awareness programs are conducted systematically. Most of the conducted programs have depended on existing

projects and activities and are not continued when the projects finish. Since the programs were for the existing projects, targets of the programs vary from governmental staff to engineers and community rescue team members. After NIDM started its activities, targets of training, education and awareness are more focused on F/G/S/PDMA staff, DDMA staff, NGO staff and media staff. Even now, targets of NIDM have not been clearly set yet. Considering the limited financial and human resources, it is better to set targets of training, education and awareness based on the comprehensive human resource development plan and to make plans how to strengthen these targets.

CHAPTER 8 NIDM Operation Plan

8.1 Goal and Objectives

8.1.1 Goal

To promote human resources development in the field of disaster management in diverse ways

8.1.2 Objectives

To priorities construction of NIDM Building Complex

To develop and promote the NIDM as an institution after the completion of the NIDM Building Complex

To enhance trained human resources to implement Disaster Risk Reduction (DRR) through further human resource development

8.1.3 Time Frame

The construction of NIDM was proposed to the Japanese government as a Grant Aid project in 2010. It is expected to finish the construction of the NIDM building in 2014 and open NIDM in 2015. Considering the existing conditions, it is considered that it will be necessary to continue preparations for full operation for some years to come even after the building is constructed. Therefore, the plan applies two phases for operation of NIDM.

Step 1: 2012 to 2016 (NIDM is not fully operational)

Step 2: 2017- (NIDM is fully operational)

8.2 Strategies

Two strategies for the NIDM operation are being enumerated herewith.

8.2.1 Preparation for the Full Operation of NIDM

Considering the current capacity of NIDM, it is better that NIDM begin implementing expected activities step-by-step. Through this, the institutional capacity of NIDM will be strengthened. NIDM starts with training, education and awareness of NDMA staff, staff of federal ministries/agencies, individuals, F/G/S/PDMA staff, DDMA staff and TMA staff (through DDMA staff). Therefore, NIDM should starts targeting these prioritized targets at first. Basically, it can start with the priority areas of the comprehensive human resource development plan. It identifies prioritized targets of training, education and awareness for NIDM.

8.2.2 Strengthening the Institutional Capacity of NIDM

Expected roles of NIDM by the Act include “research” and “advice for policy formulation.” The urgency of commencing these activities is not high and they require accumulated knowledge and experience. Therefore, it is not necessary to start activities for these for the time being. It will be sufficient to start them after NIDM has developed much capacity through the activities of “training, education and awareness” and “promotion of comprehensive human resource development of disaster management.” In addition, NIDM will implement related activities for strengthening coordination among organizations that conduct capacity building for disaster management and accumulating and sharing of research results related to disaster management.

8.3 Organizational Structure

Organizational structure of NIDM is not clear so far. However the roles and responsibility regulated by the Act can shape the organizational structure of the NIDM. The figure below shows the JICA Team proposal for the organizational structure.

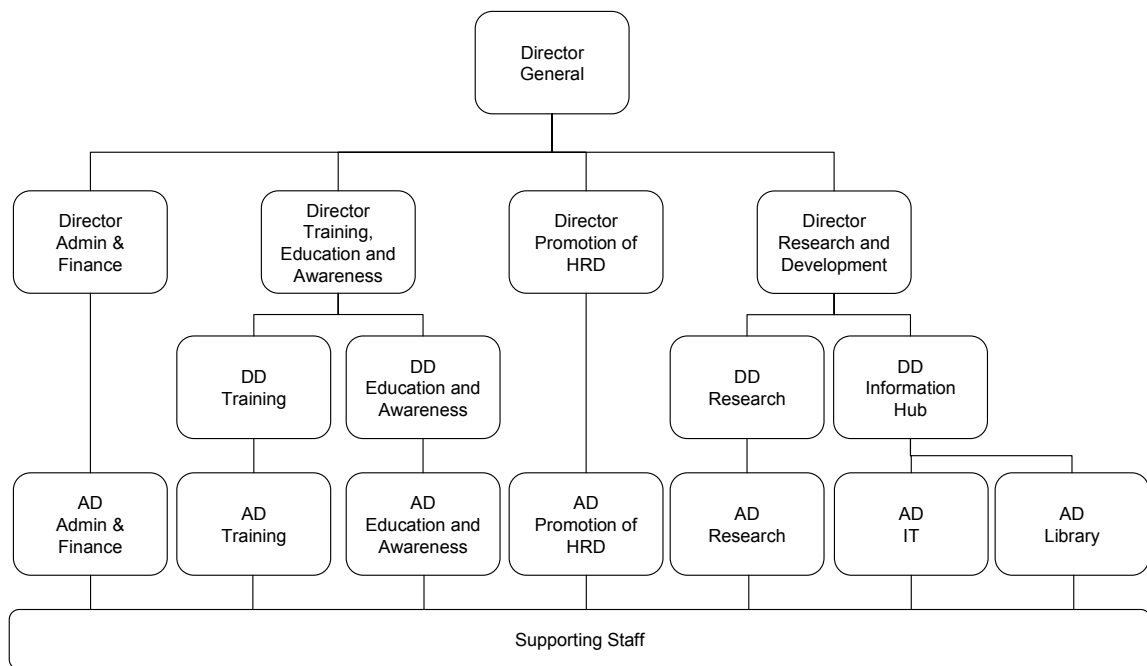


Figure III.1 Proposed Organization Structure of NIDM

The Director General will be at the top of the organization, and below that there shall be four directors, training, education and awareness, promotion of human resource development, research and development and administration and finance. There shall be four deputy directors and seven assistant directors. The total number of supporting staff is proposed to be 34 with the total number of staff in NIDM reaching 50 persons. Basically, trainers for training courses will be

hired temporarily for each specific training course on a contract basis. A list of organizations that accommodate resource persons for specific areas is attached to this plan.

After the set-up of the organization of NIDM, capacity development of the assigned staff should be considered because it is assumed that most of the staffs do not have much experience in the field of disaster management. Various types of capacity development could be implemented. For example, the assigned staff could observe the same type of institutions in foreign countries to learn how to operate NIDM. Also, NIDM staff could receive foreign technical support for running NIDM at the beginning of the establishment. Furthermore, NIDM staff could take disaster management courses at universities and institutions both nationally and internationally. Combinations of these capacity development activities could strengthen the organization of NIDM towards self-reliant operation in the future.

8.4 Training Courses to be provided by NIDM

One of the major activities of NIDM for the next ten years is to provide short-term training courses to different target groups. Overview of the training courses provided by NIDM is described hereafter.

8.4.1 Basic Concept of Capacity Enhancement

It is necessary to build capacity of target groups step-by-step. There are various topics in the field of disaster management. For example, different types of disasters such as floods, earthquakes, droughts, landslides, cyclones, and avalanches occur in Pakistan and each type has different risk reduction measures. In addition, some topics are very technical and specific. For instance, retrofitting techniques are very technical and it is very difficult for people without an engineering background to understand. Therefore, it is necessary to develop different levels of training courses. In other words, develop basic courses and advanced courses for each target if necessary, and select appropriate training courses for each target group.

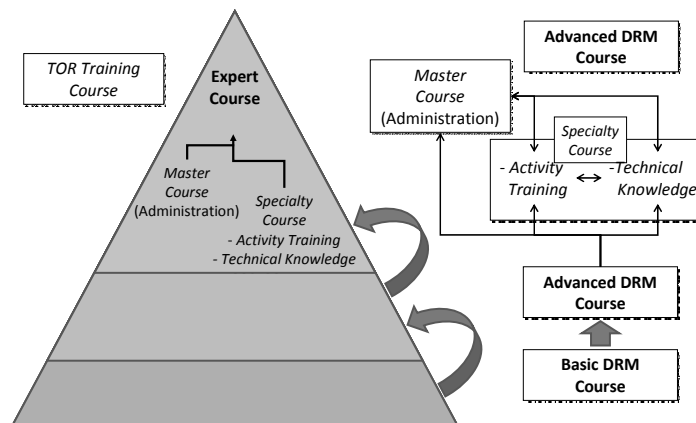


Figure III.2 Structured Program

Basic courses will be mainly provided for the next ten years. Disaster management is still a new concept in Pakistan and it is necessary to spread the basic concept of disaster management throughout Pakistan first. When people become knowledgeable about disaster management in the future, advanced courses will be provided.

8.4.2 Training Targets

Training targets of NIDM for the next ten years are the following, based on the comprehensive human resource development plan.

- NDMA staff
- F/G/S/PDMA staff
- DDMA staff
- TMA staff (through DDMA staff)
- Staff of federal ministries and agencies
- University students

Targeted nominations from provinces and districts will be selected through consultation with relevant F/G/S/PDMAs and DDMAAs.

8.4.3 Proposed Training Courses as Per Training Targets

Considering the roles and responsibilities of each target group, it is proposed that each target group needs to take the training courses mentioned in the table below. As mentioned above, however, only basic training courses will be provided for the next ten years.

Table III.5 Proposed Short-term Training Courses by Target

Target	Proposed Short-term Training Course				
NDMA Staff	Basic DRM Training Package for NDMA Staff			Advanced DRM Training Package for NDMA Staff	
	Training 1 (DRM)	Training 2 (Mitigation and Preparedness)	Training 3 (Emergency Response and Recovery)	Training 4 (Hazard Specific DRM)	Training 5 (Master Trainer Course)
	<ul style="list-style-type: none"> Disasters in Pakistan Overview of disaster risk management 	<ul style="list-style-type: none"> Laws, policies and plans for disaster management Mainstreaming DRR into development Hazard assessment and risk analyses Various mitigation measures 	<ul style="list-style-type: none"> Humanitarian relief management Basics of rescue and relief Simulation of emergency response Early Recovery/ Recovery Post Disaster Recovery DNA Action Plan 	<ul style="list-style-type: none"> Scientific knowledge of disasters Hazard specific mitigation measures Hazard specific recovery/ rehabilitation measures 	<ul style="list-style-type: none"> Disasters in Pakistan DRM system in Pakistan Mainstreaming DRR into development Scientific measures for mitigation and rehabilitation International trends Teaching skills
	5 days	5 days	5 days	5 days	5 days
F/G/S/PDMA Staff	Basic DRM Training Package for F/G/S/PDMA Staff			Advanced DRM Training Package for F/G/S/PDMA Staff	
	Training 1 (DRM)	Training 2 (Mitigation and Preparedness)	Training 3 (Emergency Response)	Training 4 (Hazard Specific DRM)	Training 5 (Emergency Response and Recovery/ Reconstruction)
	<ul style="list-style-type: none"> Disasters in Pakistan Overview of disaster risk management 	<ul style="list-style-type: none"> Laws, policies and plans for disaster management Mainstreaming DRR into development Hazard assessment and risk analyses Vulnerability and capacity assessment Various mitigation measures 	<ul style="list-style-type: none"> Humanitarian relief management Basics of rescue and relief Desktop simulation of emergency response Incident Command Systems Camp management Recovery DNA 	<ul style="list-style-type: none"> Scientific knowledge of disasters Hazard specific vulnerability and capacity assessment Hazard specific mitigation measures Hazard specific recovery/ rehabilitation measures 	<ul style="list-style-type: none"> Humanitarian relief management (exercise) Desktop and on-site simulation of emergency response Incident Command System Recovery Rehabilitation and reconstruction
	5 days	5 days	5 days	5 days	5 days
DDMA Staff	Training 1 (Basic DRM)	Training 2 (TOT for DRM training for TMA staff)	Training 3 (Advanced DRM)		
	<ul style="list-style-type: none"> Basic concept of DRM Mitigation and preparedness DRR mainstreaming Emergency response Relief management 	<ul style="list-style-type: none"> Basic concept of DRM Mitigation and preparedness Emergency response CBDRM Adult learning and teaching skills 	<ul style="list-style-type: none"> Area specific DRM Mitigation and preparedness Desktop simulation of emergency response Incident Command System Recovery and reconstruction 		
	5 days	5 days			

Target	Proposed Short-term Training Course				
TMA Staff (through DDMA Staff)	Training 1 (DRM)				
	<ul style="list-style-type: none"> • Basic concept of DRM • Mitigation and preparedness • Emergency response • Concept of CBDRM 				
	4 days				
Government Officials (National Level)	Training 1 (Basic DRM)	Training 2 (Advanced DRM)			
	<ul style="list-style-type: none"> • Basic concept of DRM • Mitigation and preparedness • Emergency response 	<ul style="list-style-type: none"> • DRM (refresher) • Scientific knowledge of hazards • Desktop simulation 			
	3 days	3 days			
University Students	Training 1 (DRM)				
	<ul style="list-style-type: none"> • Basic concept of DRM • Role of universities in DRM • DRM in specific academic areas 				
	2 days				

Development of training courses for implementation during the next ten years will be done one by one in the first four years so that all training courses will be ready when NIDM is fully operated. Since Training 1 (DRM) for F/G/S/PDMA Staff, TOT of Training 1 (DRM) for TMA staff and Training 1 (DRM) for university students have already been developed by NIDM with support from UNDP and JICA Expert Team, it is necessary to develop other seven training courses during the next ten years. Development and implementation of training courses for each target by year are summarized in the tables below.

Table III.6 Activity of Training by Target (2012-2016)

Target	Activity	2012		2013		2014		2015		2016	
		Training	Frequency	Training	Frequency	Training	Frequency	Training	Frequency	Training	Frequency
NDMA staff	Development of Training	-	-	Training 1 (DRM)	-	Training 2 (Mitigation and Preparedness)	-	Training 3 (Emergency Response)	-	-	-
	Implementation of Training	-	-	Training 1 (DRM)	1	Training 2 (Mitigation and Preparedness)	1	Training 3 (Emergency Response)	1	Training 1 (DRM)	1
F/G/S/PDMAs Staff	Development of Training	Training 2 (Mitigation and Preparedness)	-	Training 3 (Emergency Response)	-	-	-	-	-	-	-
	Implementation of Training	Training 2 (Mitigation and Preparedness)	1	Training 3 (Emergency Response)	1	Training 1 (DRM)	1	Training 2 (Mitigation and Preparedness)	1	Training 3 (Emergency Response)	1
DDMA staff	Development of Training	Training 1 (Basic DRM)	-	-	-	-	-	-	-	-	-
	Implementation of Training	Training 1 (Basic DRM)	1	Training 1 (Basic DRM)	1	Training 1 (Basic DRM)	1	Training 1 (Basic DRM)	5	Training 1 (Basic DRM)	5
TMA staff	Development of Training	-	-	-	-	-	-	-	-	Revision of TOT of Training 1	-
	Implementation of Training	TOT of Training 1 (DRM)	1	TOT of Training 1 (DRM)	1	TOT of Training 1 (DRM)	1	TOT of Training 1 (DRM)	1	TOT of Training 1 (DRM)	5
Government Officials	Development of Training	-	-	-	-	Training 1 (Basic DRM)	-	-	-	Revision of TOT of Training 1	-
	Implementation of Training	-	-	-	-	Training 1 (Basic DRM)	1	Training 1 (Basic DRM)	1	Training 1 (Basic DRM)	2
University Students	Implementation of Training	Training 1 (DRM)	5	Training 1 (DRM)	5	Training 1 (DRM)	5	Training 1 (DRM)	5	Training 1 (DRM)	5
Total number of training		8		9		10		14		19	

Table III.7 Activity of Training by Target (2017-2021)

Target	Activity	2017		2018		2019		2020		2021	
		Training	Frequency	Training	Frequency	Training	Frequency	Training	Frequency	Training	Frequency
NDMA staff	Development of Training	Training 4 (Hazard Specific DRM)	-	Training 5 (Master Trainer Course)	-	Revision of Training 1,2 and 3	-	-	-	-	-
	Implementation of Training	Training 2 (Mitigation and Preparedness)	1	Training 3 (Emergency Response)	1	Training 1 (DRM)	1	Training 2 (Mitigation and Preparedness)	1	Training 3 (Emergency Response)	1
		Training 4 (Hazard Specific DRM)	1	Training 5 (Master Trainer Course)	1	-	-	-	-	-	-
F/G/S/PDMAs Staff	Development of Training	Revision of Training 1, 2, and 3	-	-	-	-	-	Revision of Training 1, 2, and 3	-	Training 4 (Hazard Specific DRM)	-
	Implementation of Training	Training 1 (DRM)	2	Training 2 (Mitigation and Preparedness)	2	Training 3 (Emergency Response)	2	Training 1 (DRM)	2	Training 2 (Mitigation and Preparedness)	2
		-	-	-	-	-	-	-	-	-	Training 4 (Hazard Specific DRM)
DDMA staff	Development of Training	-	-	Revision of Training 1	-	-	-	-	-	Revision of Training 1	-
	Implementation of Training	Training 1 (Basic DRM)	5	Training 1 (Basic DRM)	5	Training 1 (Basic DRM)	5	Training 1 (Basic DRM)	5	Training 1 (Basic DRM)	5
TMA staff	Development of Training	-	-	-	-	-	-	-	-	Revision of TOT of Training 1	-
	Implementation of Training	TOT of Training 1 (DRM)	5	TOT of Training 1 (DRM)	5	TOT of Training 1 (DRM)	5	TOT of Training 1 (DRM)	5	TOT of Training 1 (DRM)	5
Government Officials	Development of Training	-	-	-	-	Revision of Training 1	-	-	-	-	-
	Implementation of Training	TOT of Training 1 (DRM)	5	Training 1 (Basic DRM)	5	Training 1 (Basic DRM)	5	TOT of Training 1 (DRM)	5	TOT of Training 1 (DRM)	5
University Students	Implementation of Training	Training 1 (DRM)	10	Training 1 (DRM)	10	Training 1 (DRM)	10	Training 1 (DRM)	10	Training 1 (DRM)	10
Total number of training		26		26		25		25		26	

8.5 Education and Awareness

8.5.1 Education

The major activity for education for the next ten years shall be the incorporation of disaster education into school subjects (from primary to secondary education) and into the curriculum of governmental staff academies and promotion of disaster education at the higher education level.

Disaster education has already been incorporated into the national curriculum. However, it is not taught at the school level yet as the new curriculum has not yet been fully implemented by provincial governments yet. In order to promote implementation of disaster education, NIDM

will coordinate with relevant organizations such as provincial education departments and support them to develop detailed contents of disaster education to be taught in schools.

In addition, disaster education is rarely taught at government staff academies at present and NIDM will support these academies to develop subjects of disaster education to be taught there for the next ten years so that every government staff member will have a chance to learn about disasters and disaster management.

Promotion of disaster education at the higher education level is also conducted. University students are supposed to work in various sectors in Pakistan after they graduate and they could consider DRR in their daily work if they have knowledge of disaster management. Additionally, universities play a key role to conduct research regarding disasters and disaster management in Pakistan and therefore, it is important to sensitize them as well. Furthermore, a diploma course on disaster management shall be introduced in NIDM to enhance the local capacity of human resources on disaster management.

8.5.2 Awareness

Disaster management exhibitions, workshops, seminars, and symposiums at the national level shall be further promoted for raising awareness of the general public.

Moreover, awareness for the next ten years will be implemented through media (TV, radio, newspaper, Internet, etc.). Media (especially radio) is widely available inside Pakistan and it will be effective to spread knowledge of disasters and disaster management through the media. NIDM will coordinate with both state and private media in Pakistan for integration of disaster and disaster management related issues in their services and business. NIDM will make efforts in development of related contents for awareness rising and promotion of resilience of the nation against disasters.

8.6 Promotion of Comprehensive Human Resource Development

Coordination meetings among organizations that conduct human resource development activities in the field of disaster management will be started and regular information sharing will be promoted. This coordination is not only to take place inside Pakistan but also with international organizations.

Through the above coordination, NIDM will accumulate information regarding human resource development activities in the field of disaster management and update a resource map. In addition, NIDM will provide technical advisories and assistance to organizations that conduct human resource development activities by utilizing expertise accumulated.

8.7 Research

NIDM will create and support an environment for research activities in the field of disaster management for the next ten years.

First, collection of research results and documents related to disaster management nationally as well as internationally will be conducted. The collected documents will be shared with the public through the Internet from the beginning and at a library after NIDM construction. In addition, national and international conferences on disaster management will be held.

Second, NIDM will award fellowships to researchers/ research institutes that conduct research in specific areas of disaster management on a small scale.

8.8 NIDM Construction

In 2009, JICA supported NDMA to draw the concept of NIDM and roughly estimated a cost from similar size of building in Islamabad and the required space for NIDM based on what the Pakistan side proposed. The proposed composition of the NIDM building is summarized as follows.

- Nine classrooms (15 persons) (two classrooms can be joined for a capacity of 30 people as necessary) and six map exercise rooms
- One conference room
- One auditorium for 250 persons
- 1 hostel for 80-100 students
- 15 officer rooms
- One library and DIRC

If the Japanese government will support this project, the following is the condition,

A detailed design survey will be required to fix the type and number of the rooms/facilities in the NIDM building as per the actual situation or the requirement, when the validity and justification of this project is confirmed.

The estimated schedule of the construction of the NIDM building is shown below. Approximately, five years will be necessary until the operationalization of NIDM.

Year	1st Year	2nd Year	3rd Year	4th Year	5th Year
Planning, Preparation and Approval of PC-1					
Detailed Design					
Construction			● Bid of Construction		
Operation of NIDM					

Figure III.3 Proposed Construction Schedule

CHAPTER 9 DESCRIPTION OF ACTIVITIES

9.1 List of Sub-Activities for the Next Ten Years

In order to achieve the objectives for the next ten years, the following sub-activities need to be implemented under each activity.

#1 Training (refer to Section 9.2 Training)

- T-1 Training of NDMA staff (refer to Section 9.2.1)
- T-2 Training of F/G/S/PDMA staff (refer to Section 9.2.2)
- T-3 Training of DDMA staff (refer to Section 9.2.3)
- T-4 Training of TMA staff through DDMA staff (refer to Section 9.2.4)
- T-5 Training of staff of Federal Ministries (refer to Section 9.2.5)
- T-6 Training of university students (refer to Section 9.2.6)

#2 Education (refer to Section 9.3 Education)

- E-1 Incorporation of disaster management subjects into curriculum of general training programs of governmental staff (refer to Section 9.3.1)
- E-2 Promotion of disaster education in basic education (refer to Section 9.3.2)
- E-3 Promotion of disaster education in higher education (refer to Section 9.3.3)

#3 Awareness (refer to Section 9.4 Awareness)

- A-1 Holding of national disaster management exhibitions, workshops, seminars, symposiums, etc. (refer to Section 9.4.1)
- A-2 Awareness campaign through media (TV, radio, newspapers, and the Internet) (refer to Section 9.4.2)

#4 Promotion of Comprehensive Human Resource Development (refer to Section 9.5 Promotion of Comprehensive Human Resource Development)

- P-1 Enhancement of coordination among organizations that conduct capacity building in the field of disaster management (refer to Section 9.5.1)
- P-2 Technical advisories and assistance for human resource development activities in the field of disaster management (refer to Section 9.5.2)

#5. Research (refer to Section 9.6 Research)

- R-1 Establishment and operation of a library and DIRC (refer to Section 9.6.1)
- R-2 Promotion of research in the field of disaster management (refer to Section 9.6.2)

9.2 Training

9.2.1 Training of NDMA Staff (T-1)

1) Significance of the activity

NDMA is a focal organization in the federal government for disaster management. It requires the training of the staff, who come from other organizations and with very little knowledge of disaster risk management.

2) Components of the activity

Training of NDMA staff consists of the following seven components:

- Understanding the required capacity of NDMA staff members
- Assessment of capacity, experience and training needs of existing NDMA staff
- Development of a "Basic Training Package"
- Preparation of training implementation schedule (annually)
- Implementation of training
- Review of training contents/ modules for improvement
- Review of training package for every three years, and preparation of an "Advanced Training Package" based on actual experience

The "Basic Training Package" may consist of the following areas.

- Training 1: Disaster Risk Management (Disasters in Pakistan, Overview of Disaster Risk Management at National and Provincial Level)
- Training 2: Mitigation and Preparedness (Laws, Policies and Plans for Disaster Management, Mainstreaming DRR into Development, Hazard Assessment and Risk Analyses, Various Mitigation Measures)
- Training 3: Emergency Response and Recovery (Humanitarian Relief Management, Basics of Rescue and Relief, Simulation of Emergency Response, Early Recovery/ Recovery, Post Disaster Recovery, DNA, Action Plan)

Methodologies applied for the training courses will be lectures, group exercises, field visits/ exposure, hands-on exercises, simulation exercises, and others.

The Basic Training Package for targeted staff should be presented over a period of several years. Considering the frequent transfer of NDMA staff, the basic training package should be offered on a regular basis so that all staff, including those newly transferred, will take the basic course.

Advanced courses shall be developed when the capacities of NDMA staff and NIDM have improved.

The Advanced Training Package may consist of the following training courses.

- Training 4: Hazard Specific DRM (Scientific Knowledge of Disasters, Hazard Specific Mitigation Measures, Hazard Specific Recovery/ Rehabilitation Measures)
- Training 5: Master Trainer Course (Disasters in Pakistan, Disaster Risk Management System in Pakistan, Mainstreaming DRR into Development, Scientific Measures for Mitigation and Rehabilitation, International Trends, Teaching Skills)

3) Timing and duration

Capacity building of NDMA staff is highly prioritized. However, comparing with other training targets of NIDM such as F/G/S/PDMA staff and DDMA staff, the total number of NDMA staff is much less and there are more opportunities for participation in training abroad. Therefore, the capacity building of NDMA staff can be started after the full-scale capacity building of targets with more urgency starts.

9.2.2 Training of F/G/S/PDMA staff (T-2)

1) Significance of the activity

Although F/G/S/PDMA is the focal organization for enhancing disaster management activity at the provincial level, F/G/S/PDMAs are newly established organizations and have limited capacity and activities. F/G/S/PDMA's roles and responsibilities include determination of disaster management activity at provincial, district, teshil and community levels. In order to enhance disaster management activity, F/G/S/PDMA's activity should be strengthened. However, F/G/S/PDMA's staff members' capacity and experience is not sufficient and it is essential to strengthen the capacity of the F/G/S/PDMA staff.

2) Components of the activity

This activity, Training of F/G/S/PDMA Staff, has the following seven components:

- Understanding of required capacity of F/G/S/PDMA staff members
- Assessment of capacity, experience and training needs of existing F/G/S/PDMA staff
- Development of a "Basic Training Package"
- Preparation of training implementation schedule (annually)
- Implementation of training
- Review of training contents/modules
- Review of training package for every three years and preparation of an "Advanced Training Package" based on actual field experience

The Basic Training Package may consist of the following areas.

- Training 1: Disaster Risk Management (Disasters in Pakistan, Overview of Disaster Risk Management) at Provincial and District Levels

- Training 2: Mitigation and Preparedness at Provincial Level (Laws, Policies and Plans for Disaster Management, Mainstreaming DRR into Development, Hazard Assessment and Risk Analyses, Various Mitigation Measures)
- Training 3: Emergency Response at Provincial Level (Humanitarian Relief Management, Basics of Rescue and Relief, Desktop Simulation of Emergency Response, Camp Management, Early Recovery, Recovery, DNA, Action Plan)

The Basic Training Package for targeted staff should be presented over a period of several years. Considering the frequent transfer of F/G/S/PDMA staff, the basic training package should be offered on a regular basis so that all staff, including the newly transferred, will take the basic course.

Advanced courses shall be developed when the capacities of F/G/S/PDMA staff and capacity of NIDM have improved.

The Advanced Training Package may consist of the following training courses.

- Training 4: Hazard Specific DRM (Scientific Knowledge of Disasters, Hazard Specific Mitigation Measures, Hazard Specific Recovery/ Rehabilitation Measures)
- Training 5: Emergency Response and Recovery/ Reconstruction (Humanitarian Relief Management Exercise, Desktop and On-site Simulation of Emergency Response, Recovery, Rehabilitation and Reconstruction)

3) Timing and duration

Capacity building of F/G/S/PDMA staff, who are responsible for enhancement of DRM activities in provinces, is highly prioritized; thus training programs have been delivered to them. It is necessary to continue the capacity building activities. Training courses will be implemented on a pilot basis until when the NIDM building is constructed.

9.2.3 Training of DDMA Staff (T-3)

1) Significance of the activity

DDMA is the focal organization of the district government to enhance disaster management activity in district level government and ensure its replication down to the tehsil and community levels. However, the site survey done by the JICA Team shows that in many cases, DDMA is not an independent organization but rather a district officer is in charge of disaster management activity. Therefore, many staff members are not specialists in disaster management. It is essential to improve the capacity of disaster management in district staff such as basic knowledge and skills.

2) Components of the activity

The followings are components of Training of DDMA Staff.

- Understanding of required capacity of DDMA staff members
- Assessment of capacity, experience and training needs of existing DDMA staff
- Development of basic training course
- Preparation of training implementation schedule (annually)
- Implementation of training
- Review of training contents/ modules
- Review of training course for every three years and preparation of advanced course based on actual field experience

The basic training course (Training 1: Basic DRM, Table III.5) will consist of the following contents.

- Disaster Risk Management (Disasters in Pakistan, Overview of Disaster Risk Management) at Provincial and District Levels
- Mitigation and Preparedness at District Level (Laws, Policies and Plans for Disaster Management, Mainstreaming DRR into Development, Hazard Assessment and Risk Analyses, and Various Mitigation Measures)
- Emergency Response at District Level (Humanitarian Relief Management, Basics of Rescue and Relief, Camp Management, Early Recovery/ Recovery, DNA, Action Plan)

Methodologies applied for the training course will be lectures, group exercises, hands-on exercises, and others.

Since there are many targeted staff members at the district level, the basic course should be implemented several times year per year and they should have been completely covered within three years. After three years, the course should be offered on a regularly basis for newly positioned staff members.

An advance course should be developed based on the capacity improvement of the staff members besides modifications in the basic course in line with field experience.

3) Timing and duration

Capacity development of district staff members is a matter of urgency because of the increase in natural disasters in the country. Since the course covers many staff members, the training course should be run on a regular basis throughout the year.

9.2.4 Training of TMA Staff through DDMA Staff (T-4)

1) Significance of the activity

In case of an emergency, TMA staff members are usually the closest government staff members at the disaster site. Additionally, it is expected that they will work for mitigation and preparedness before the emergency. Despite the strong need for capacity improvement of TMA staff members, existing disaster management training for TMA staff is highly inadequate.

2) Components of the activity

This activity, Training of TMA Staff through DDMA Staff, has the following seven components:

- Understanding of required capacity of TMA staff members in terms of disaster management
- Assessment of capacity, experience and training needs of existing TMA staff
- Development of basic training course
- Preparation of training implementation schedule (annually)
- Implementation of training
- Review of training contents/ modules
- Review of training course for every three years and preparation of advanced package

The training would be for four days and the contents are as follows;

- Disaster Risk Management at District and Tehsil Levels (Disasters in Pakistan, Overview of Disaster Risk Management)
- Disasters and Risks in the District
- Mitigation and Preparedness at District and Tehsil Levels (Laws, Policies and Plans for Disaster Management, Roles and Responsibilities of TMA at Disaster Management, Various Mitigation Measures)
- Emergency Response at Tehsil Level (Early Warning, Camp Management, Damage Assessment, Simulation of Emergency Response)
- Community-Based Disaster Risk Management
- Action Plan Development

TMA staff training is the responsibility of district staff and NIDM will provide TOT training to district government staff including officers from Civil Defense and Rescue 1122.

The TOT training would be for five days and the contents are as follows;

- Disaster Risk Management from National to Tehsil Levels (Disasters in Pakistan, Overview of Disaster Risk Management)
- Disasters and Risks in the Target Districts
- Mitigation and Preparedness at the Tehsil Level (Laws, Policies and Plans for Disaster

Management, Roles and Responsibilities of TMA in Disaster Management, Various Mitigation Measures)

- Emergency Response at the Tehsil Level (Early Warning, Camp Management, Damage Assessment, Cluster System)
- Community-Based Disaster Risk Management
- Action Plan Development
- Adult Learning and Teaching Skills

TOT training to district government officials will be implemented several times per year and all the entire districts should be covered within three years. After three years, the courses will be offered on a regular basis for newly assigned personnel.

3) Timing and duration

Capacity development of TMA members is a high priority for action because of recent frequent incidents of natural disasters in Pakistan. Training should start as soon as possible because of the large number of personnel to be trained.

9.2.5 Training of Staff of Federal Ministries/ Agencies (T-5)

1) Significance of the activity

Each relevant ministry shall be responsible for the implementation of the actual variety of activities on DRM. It is indispensable for developing a country that is resilient to disasters that each ministry shall acknowledge the importance of disaster measures and implement them in responsible sectors. However, the concept of Disaster Risk Management itself is quite new in Pakistan, and none of the officials in any of the ministries currently have a high level of knowledge or skill regarding DRM. Therefore, it is necessary to develop their capacity for DRM.

2) Components of the activity

This training activity has the following seven components:

- Understanding of the necessary capacity of officers in relevant federal ministries and agencies
- Assessment of capacity, experience and training needs of existing officers in relevant federal ministries and agencies
- Development of the basic training course
- Preparation of a training implementation schedule (annually)
- Implementation of the training
- Review and improvement of training contents/ modules
- Review of the basic training course based on understanding the current capacity, experience,

and needs of the officers (each 3 years), and development of the advanced training course as needed.

The contents of the basic training course should be as follows.

- Disaster Risk Management (Disasters in Pakistan, Overview of Disaster Risk Management)
- Mitigation and Preparedness (Laws, Policies and Plans for Disaster Management, Mainstreaming DRR into Development, Hazard Assessment and Risk Analyses, Various Mitigation Measures)
- Emergency Response (Humanitarian Relief Management, Simulation of Emergency Response)

The target national relevant organizations on disaster are assumed as follows (40 organizations).

- Cabinet Secretariat
- Ministry of Communication
- Ministry of Defense
- Ministry of Finance, Revenue and Planning and Development
- Ministry of Foreign Affairs
- Ministry of Housing and Works
- Ministry of Industries
- Ministry of Information and Broadcasting
- Ministry of Information and Technology
- Ministry of Interior
- Ministry of Law, Justice and Parliamentary Affairs
- Ministry of Petroleum and Natural Resources
- Ministry of Ports and Shipping
- Ministry of Railways
- Ministry of Science and Technology
- Ministry of Water and Power
- Capital Development Authority
- Civil Aviation Authority
- Civil Defense
- Coastal Guards
- Federal Flood Commission
- Fire Services
- Geological Survey of Pakistan
- Indus River System Authority (IRSA)
- National Crisis Management Cell (NCCM)
- National Emergency Relief Cell (NERC)

- National Highway Authority
- National Housing Authority
- National Logistics Cell (NLC)
- Pakistan Armed Forces
- Pakistan Commissioner for Indus Waters (PCIW)
- Pakistan Meteorological Department (PMD)
- Pakistan Public Works Department
- Pakistan Railways
- Planning Commission
- Police
- Space and Upper Atmosphere Research Commission (SUPARCO)
- Survey of Pakistan
- Traffic Police
- Water and Power Development Authority (WAPDA)

The basic training course shall be implemented several times each year, and several officers of all relevant organizations shall take the course within 3 years. Given the frequent movement of officers, the training sessions shall be conducted every year after covering all target officers within 3 years so that the newly appointed officers can take the courses. Moreover, an advanced training course will be developed and implemented after the knowledge and experience of the officers are accumulated and the capacity of NIDM for implementing training is improved.

3) Timing and duration

For the relevant organizations on disaster, the disaster measures are a part of their duties. As the priority of the capacity development of offices in disaster management agencies shall be much higher, the training for the officers of the other relevant organizations on disaster will be considered after the consideration of the training for the officers of the disaster management agencies. In order to initiate the training after the completion of the construction of NIDM, it is advisable to review the contents of training courses beforehand.

9.2.6 Training of University Students (T-6)

1) Significance of the activity

University students are supposed to work in relatively important positions in various sectors after they graduate. If they are aware of the importance of DRR, it is expected that they shall include necessary measures for DRR on various occasions in their work. In particular, it is important for students in engineering departments to realize the importance of DRR in their field for long-term infrastructure development. NIDM will play a role of providing initial and general awareness on

the importance of DRR at various universities. Specific technical matters in specific areas should be taught by universities.

2) Components of the activity

This activity, Training of University Students, has the following five components:

- Needs assessment of universities
- Decision and development of general workshop contents
- Arrangement of workshops with universities
- Implementation of workshops at universities
- Review and improvement of workshop contents

The expected contents of the workshops are as follows

- Disaster Risk Management (Disasters in Pakistan, Overview of Disaster Risk Management, Disaster Management Cycle with Major Activities, Disaster Management System in Pakistan, etc.)
- Roles of universities in DRM
- DRM in specific academic areas

Basically, the topic of disaster risk management is to be included in every workshop. On the other hand, the topic of DRM in specific academic areas is to be adjusted from university to university based on the specialties of the university. For example, engineering related topics shall be included for engineering universities and social aspects of DRM shall be included for universities specializing in social development.

3) Timing and duration

Urgency of this activity is not as high compared to other activities. However, continuity of the activity is important to cover as many university students as possible. Therefore, it is recommended to start the activities on a small scale but continue them over the years.

9.3 Education

9.3.1 Incorporation of disaster management subjects into curriculum of general training programs of governmental staff (E-1)

1) Significance of the activity

In order to develop a country that is resilient to disasters, it is indispensable to mainstream the DRM into development planning process based on a long-term view. To implement the mainstreaming of the DRM into development, it is necessary for the implementing ministries to acknowledge the importance of DRM. In other words, it is desirable for each officer of each

ministry acknowledges the importance of DRM. Therefore, it is necessary to establish an opportunity for public officials to learn about the DRM without exception.

2) Components of the activity

This activity consists of the following seven components:

- Establishment of the committee by NIDM and representatives of educational institutes for public officials (NSPP, etc.).
- Consideration of the contents of disaster education to be implemented in educational institutes for public officials.
- Discussion with each educational organization about the method of introduction and preparation of the road map.
- Development of the curriculum of disaster education in educational institutes for public officials.
- Commencement of introduction of the disaster education into each educational organization.
- Monitoring and evaluation of implementation status of disaster education in each educational organization.
- Improvements and modifications of the contents of disaster education

3) Timing and duration

As the capacity development of officers in organizations relevant to disasters is required immediately and is to be conducted in the short workshop under Activity T-5, the priority of this activity is lower than the one given in T-5. It is necessary to implement the activity in the long term view, because the introduction of disaster subjects into the existing curriculum is predicted to take time. It is recommended that this activity be commenced after NIDM implements the training for officers of organizations relevant to disasters and disaster management agencies, and accumulates experience to some extent.

9.3.2 Promotion of disaster education in basic education (E-2)

1) Significance of the activity

In order to strengthen “self-help efforts,” each individual needs to have basic knowledge of disasters and disaster management. In order to provide disaster education to the people, it is important that disaster education is taught in basic education. Therefore, it is important that disaster education is incorporated into the official curriculum so that it is surely taught in schools. In fact, disaster education has already been incorporated into the national curriculum; however, the national curriculum is not yet fully implemented in schools yet. Teaching disaster education in basic education needs to be facilitated.

2) Components of the activity

This activity consists of the following six components:

- Establishment of a committee consisting of representatives of relevant organizations
- Examination by the committee of how disaster education can be practically taught in schools
- Development of practical contents of disaster related subjects for schools
- Commencement of implementation of disaster education in schools
- Monitoring and evaluation of implementation of disaster education in schools
- Improvements and modifications of the contents of disaster education based on M&E

Listed below are the expected members of the committee.

- NIDM
- Provincial Education Departments (all provinces)
- Teacher Training Institutes
- Other organizations if necessary (universities, institutes, etc.)

3) Timing and duration

It is assumed that it will take time to incorporate disaster education into subjects that are already taught in schools. It is needed to conduct this activity from a long-term perspective. Since this activity needs accumulation of knowledge and experience of human resource development in the field of disaster management, this activity can be started after NIDM accumulates such kind of knowledge and experience.

9.3.3 Promotion of disaster education in higher education (E-3)

1) Significance of the activity

Disaster management is related to a range of areas and research on disaster management is actively conducted in various academic fields around the world. Since Pakistan suffers from various natural disasters, it is necessary to promote extensive research on disaster management in various fields inside Pakistan. Simultaneously, it is necessary to have more students who study disaster management and will conduct further research in the future. For that purpose, it is necessary to introduce more courses that deal with disaster management at higher educational institutions. Therefore, NIDM will support universities and higher educational institutions to start disaster management related courses.

In addition, NIDM will make arrangements to introduce a diploma course on disaster management for those who would like to study the subject in detail, utilizing accumulated resources inside Pakistan.

2) Components of the activity

This activity consists of the following six components:

- Consultation with universities and higher educational institutions for starting courses on disaster management
- Technical advice and support to universities and higher educational institutions for curriculum development
- Monitoring of implementation of courses on disaster management and provision of technical support for improvement
- Preparation of introduction of a diploma course in NIDM such as curriculum development and faculty selection
- Starting the diploma course
- Joint monitoring and evaluation of the implemented activities for further improvements

Establishment of a diploma course in NIDM will be implemented after experience and resources in the field of human resource development on disaster management are accumulated to some degree.

3) Timing and duration

This activity is not as urgent compared to other activities. However, since it will take time to start new courses in any educational institution and there are many higher educational institutions in Pakistan, it is recommended to start the activity as soon as possible. It is not necessary to implement it on a large scale from the beginning. Rather, it is important to start and implement the activity step-by-step on a smaller scale in the beginning and to expand it later when experience and resources are accumulated.

9.4 Awareness

9.4.1 Holding of national disaster management exhibitions, workshops, seminars, symposiums, etc. (A-1)

1) Significance of the activity

Holding exhibitions is one effective way to share certain topics with all those who are interested in them at the same time. Participants of exhibitions are well aware of the topics and they might implement some actions after the exhibitions. National disaster management exhibitions are not an exception. Therefore, as one measure of public awareness, NIDM will hold national disaster management exhibitions regularly besides holding workshops, seminars, symposiums, conferences, etc.

2) Components of the activity

This activity consists of the following five components:

- Decision of objectives (focuses) of exhibition (annually)
- Decision of detailed contents, participants, date and venue of the exhibition based on the set objectives (focuses) (annually)
- Preparation of the exhibition (annually)
- Implementation of the exhibition (annually)
- Evaluation of the exhibition for further improvements (annually)

The exhibition can be held annually. Venues of the exhibitions can move from one province to another so that more people from all over Pakistan can participate in the exhibitions. The possible contents of the exhibitions could be as follows.

- Conference on national disaster management (latest progress, etc.)
- Symposium on disaster risk management (international trends, national trends, etc.)
- Seminars on international/ regional/ national latest findings on disaster management
- Displays of latest research results on disaster management
- Displays of latest equipment and machines which can be used in an emergency
- Displays of major DRM activities (good practices) by various organizations

Participants to the exhibitions including conferences, symposiums, seminars, etc. will be not only from Pakistan but also from foreign countries so that international trends in disaster management can be shared at the exhibitions.

3) Timing and duration

The exhibitions have already been implemented annually by NDMA and NIDM and it is recommended to continue these in the future.

9.4.2 Awareness Campaign through Media (TV, radio, newspapers, and the Internet) (A-2)

1) Significance of the activity

In Pakistan, basic knowledge about the disasters and DRM is not known well through the entire country because DRM is a relatively new concept in the country and disaster education has only recently been introduced to schools. In order to promote the “self-help efforts” and “mutual-help efforts” on DRM, it is necessary to create an environment where people can acquire the basic knowledge about the disasters and DRM activities as soon as possible. Media, such as TVs, radios, newspapers and the Internets, is widely spread over Pakistan and has a large influence on people’s daily lives. Dissemination of the knowledge of disasters and DRM activities through media can be an effective way to quickly spread the knowledge to many people.

2) Components of the activity

This activity consists of the following four components:

- Discussion with representatives of each media about collaboration for dissemination of knowledge of disasters and DRM activities
- Decision of collaboration details with each media company
- Preparation of the contents to be disseminated through the media (programs, articles, etc.)
- Collection of examples of the collaborations for future use

The knowledge of disasters and DRM activities to be disseminated will be regularly updated through the regular coordination with each media.

Various ways of collaboration can be implemented such as providing the information about the floods in the season of monsoons, including small tips for DRM activities during the daily weather news, including quizzes related to DRM in quiz shows, having special programs around the date when the past disasters have happened, having a column about DRM in newspapers regularly, and so on.

3) Timing and duration

This activity can be commenced immediately if an officer is appointed for this activity in NIDM. It can start with one company and then gradually increase the numbers. There can be two types of collaborations: one-time collaboration and regular collaboration. One-time collaboration is a relatively large in scale and it will be implemented at special occasions such as before the monsoon season and/or on certain dates when devastated disasters happened in the past. On the other hand, regular collaboration can be a small in scale, but will be implemented regularly for a long time such as in a weekly column on DRM in newspapers. In order to deepen people's understanding about disasters and DRM, it is recommended that both one-time collaboration and regular collaboration be implemented in a well-coordinated way.

9.5 Promotion of Comprehensive Human Resource Development

9.5.1 Enhancement of coordination among organizations that conduct capacity building in the field of disaster management (P-1)

1) Significance of the activity

Human resource development activities are conducted by various organizations in Pakistan. In order to utilize the limited resources efficiently (trainers, teaching materials, etc.) and avoid duplication for promotion of human resource development, it is necessary to have good coordination among the organizations that conduct capacity building in the field of disaster management. It is required to set up a coordination body for that purpose and create a system to

collect information regarding human resource development activities conducted by different organizations in a regular way.

In addition, coordination and partnership with international organizations that conduct capacity building in the field of disaster management are promoted. There are various international organizations in the world that have the capacity for international collaboration for capacity building in the field of disaster management and it is very useful for Pakistan to collaborate with these organizations and utilize their expertise. Therefore, NIDM shall seek partnerships with these organizations around the world.

2) Components of the activity

This activity consists of the following seven components:

- Development of a draft plan of roles and members of a national working group for human resource development on DRM
- Holding the first coordination meeting to set roles and members of the national working group
- Collection of activity reports from organizations that conduct capacity building in the field of disaster management
- Holding the national working group meeting to make it a regular meeting (once a year)
- Collection of activity reports from capacity building organizations for regular reporting (once a year)
- Discussions with international organizations which conduct capacity building in the field of disaster management for collaboration and partnership
- Implementation of collaborative activities (i.e. seminars, provision of resource people, symposiums) with international organizations

Capacity building activities that are to be conducted by different organizations are shared at the coordination meeting. It is recommended to set up a national working group for human resource development on DRM and share good practices and challenges among those at the working group meetings.

It is assumed that activity reports submitted by organizations that conduct capacity building in the field of disaster management will include activity records (targets, contents, trainers, duration, etc.) and activity plans.

Members of the coordination body are expected to include the following.

- Ministry of Climate Change
- NDMA
- NIDM

- F/G/S/PDMAs
- Civil Defense
- IMG of PMD
- Pakistan Medical and Dental Council
- Pakistan Engineering Council
- National Curriculum Wing
- Higher Education Commission
- National School of Public Policy
- Pakistan Council of Architect and Town Planners
- Provincial Education Departments (All Provinces), State Education Department
- Rescue 1122 (or Fire Brigade)
- Universities
- NGOs
- International organizations
- Other organizations if necessary (universities, institutes, etc.)

In terms of international collaboration, the following organizations can be candidates, but the possible organizations are not limited to these.

- Asian Disaster Preparedness Center (ADPC)
- Asian Disaster Reduction Center (ADRC)
- SAARC Disaster Management Center (SDMC)
- National Institute of Disaster Management (NIDM) in India
- International Center for Integrated Mountain Development (ICIMOD)
- International Center for Water Hazard Risk Management (ICHARM)
- UN-related Organizations (UNISDR, UNESCO, etc.)
- Universities

3) Timing and duration

Many organizations have already implemented human resource development activities in the field of disaster management. In order for these organizations to implement their activities in the same direction, it is necessary to start the coordination as soon as possible. After the commencement, the coordination will be ongoing.

International collaboration can be started anytime. NIDM can find collaboration partners one by one.

9.5.2 Technical Advisories and Assurances for Human Resource Development Activities in the Field of Disaster Management (P-2)

1) Significance of the activity

Human resource development activities in the field of disaster management will be done by various organizations. The activities are still new initiatives in Pakistan and there are not very many experts in them. In order to ensure the quality of these activities, NIDM will provide technical advice and assistance for curriculum development, training implementation, training follow-up and any other activities related to human resource development. In addition, NIDM will regularly collect and review training contents and materials used by various organizations and give necessary advice to them for improvement.

2) Components of the activity

This activity consists of the following four components:

- Establishment of regular communications with organizations which conduct human resource development activities in the field of disaster management
- Technical advice and assistance to the organizations based on their needs
- Establishment of a system for regular collection of conducted training contents and materials
- Review of collected materials and provision of necessary advice

This activity is closely linked to activity P-1 (enhancement of coordination). Through the coordination, NIDM will get to know organizations that conduct capacity building in the field of disaster management. On the other hand, good practices and lessons learned obtained from technical assistance will be shared with other organizations at the coordination meetings. In other words, activity P-1 and activity P-2 complement each other.

3) Timing and duration

The activity cannot be started immediately since it requires much more capacity in human resource development in the field of disaster management within NIDM. The activity can be started after NIDM accumulates adequate experience in this field through implementation of other activities.

9.6 Research

9.6.1 Establishment and Operation of Library and DIRC (R-1)

1) Significance of the activity

Research in the field of disaster management is conducted not only in Pakistan but also all over the world. It is necessary that the contents of human resource development activities for disaster

management should reflect the latest research results. In order for organizations that conduct human resource development activities in the field of disaster management to have access to these latest research results, it is effective that one organization, NIDM, will collect the latest research results and share the collected research results through a library and website with any organizations that wish to have them. The library and website will be also utilized by other organizations to share necessary information in the field of disaster management.

2) Components of the activity

This activity consists of the following six components:

- Development of a list of research institutions in the field of disaster management inside and outside Pakistan
- Establishment of relationships with the listed research institutions
- Examination of procedures for collection of research results and lessons learnt
- Examination of set up of a library and website to share collected research results and lessons learnt
- Commencement of a library and website
- Regular collection of research results and lessons learnt from research institutions that have relationships with NIDM

Establishment of relationships with research institutions could utilize activity P-1 (enhancement of coordination) to some extent.

When some amount of research results and lessons learnt are accumulated, it is recommended that this information be issued in some form such as newsletters and magazines so that many people can have access to this information.

3) Timing and duration

Since many research projects in the field of disaster management are already being conducted inside and outside Pakistan, establishing relationships with research institutions and collecting research results can be started immediately. This activity should be started as soon as NIDM allocates human and financial resources to it. In terms of the library, full-scale operation will start after the construction of the NIDM facility.

9.6.2 Promotion of Research in the Field of Disaster Management (R-2)

1) Significance of the activity

There are various research areas in the field of disaster management that need to be examined further. Several universities and research institutes inside Pakistan started research in the field, especially after the Muzaffarabad earthquake in 2005. However, the amount of research is still scarce and it is necessary to promote much more research in the field inside Pakistan in order to

make Pakistan more resilient to disaster damage. Therefore, NIDM will award fellowships to selected researchers to enhance research in the specific areas.

2) Components of the activity

This activity consists of the following six components:

- Establishment of rules and regulations for fellowship award
- Decision of details of the fellowships for the year such as research focus areas and volume and duration of fellowship grants (annually)
- Selection of fellowship recipients (annually)
- Implementation and submission of research
- Evaluation of the conducted research
- Compilation of research results for publication

The expected duration of one fellowship award is one year. However, it can be shortened or extended depending on the characteristics of the specific research areas, which are to be decided when research focus areas are determined.

3) Timing and duration

Conducting research requires time and therefore, it is recommended that the activity should be implemented as soon as possible. However, the activity requires funds. Also, the activity needs DRM experts who can select research areas and fellowship recipients and evaluate conducted research. Therefore, the activity can be started after human and financial resources are secured for the activity.

9.7 Implementation Schedule and Estimated Cost

9.7.1 Implementation Schedule

Proposed activities will be implemented gradually along with development of NIDM institutionally and physically. In the first few years, major activities are preparations for full implementation such as training development and trial implementation. More activities are to be implemented from the year 2015 when NIDM construction is supposed to be finished and all proposed activities are to be implemented after 2017.

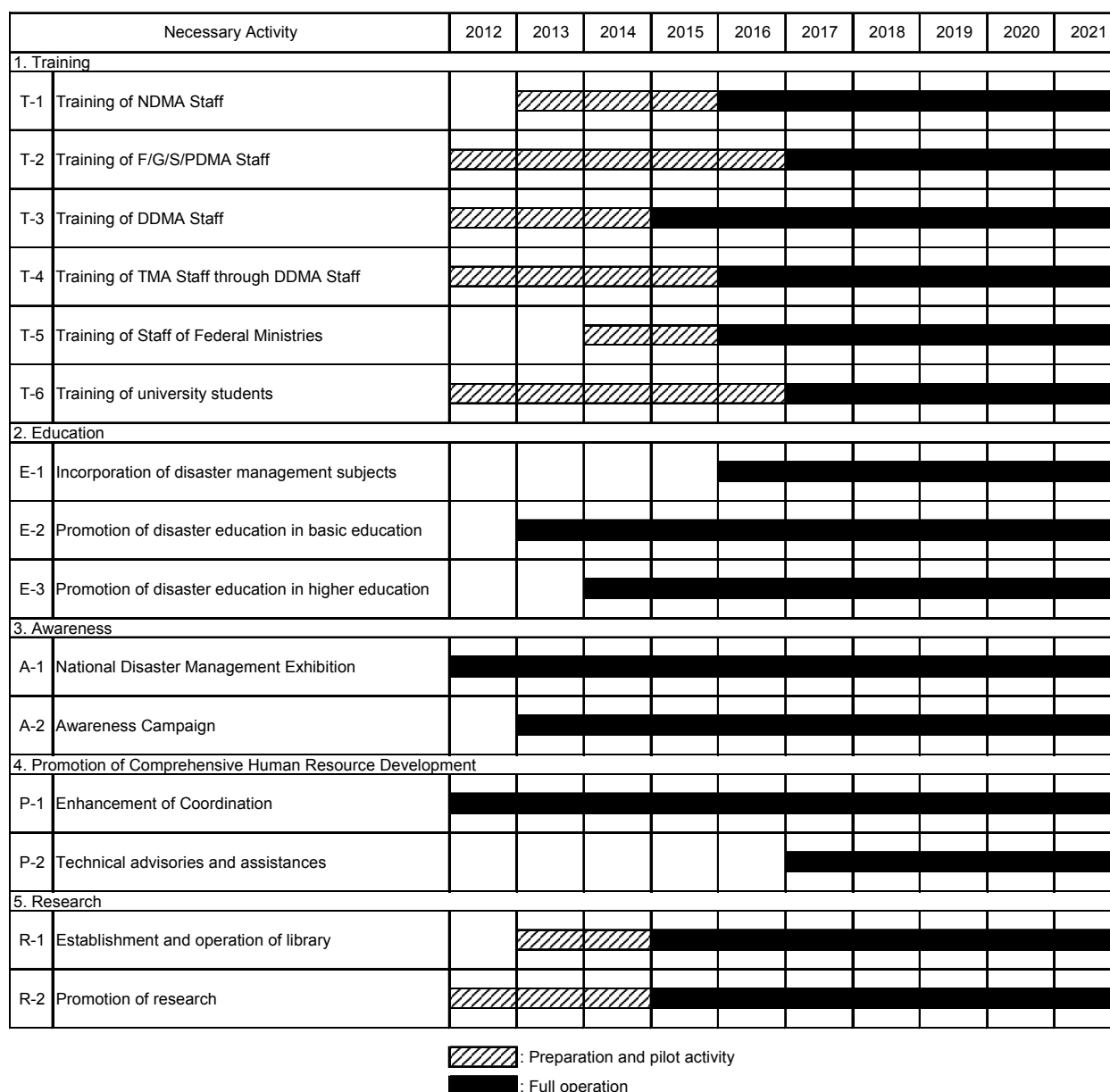


Figure III.4 Implementation Schedule

9.7.2 Estimated Cost

A rough estimation of the costs of each necessary activity⁴ by year is shown in the table below. It is estimated that annual activity costs will be about 500,000 US dollars (about PKR44.2 million, USD1=PKR88.4) for full operation of NIDM after 2017. It is noted that the estimated cost does not include recurrent costs.

⁴ The costs are estimated by the JICA Expert Team, based on actual costs of previous similar activities.

Table III.8 Estimated Cost in US Dollars

Necessary Activities	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	Total
1. Training											
T-1 Training of NDMA Staff		38,000	38,000	38,000	15,000	15,000	15,000	15,000	15,000	15,000	204,000
T-2 Training of F/G/S/PDMA Staff	38,000	38,000	15,000	15,000	15,000	30,000	30,000	30,000	30,000	30,000	271,000
T-3 Training of DDMA Staff	38,000	15,000	15,000	73,000	73,000	73,000	73,000	73,000	73,000	73,000	579,000
T-4 Training of TMA Staff through DDMA Staff	15,000	15,000	15,000	15,000	73,000	73,000	73,000	73,000	73,000	73,000	498,000
T-5 Training of Staff of Federal Ministries			32,000	9,000	18,000	18,000	18,000	18,000	18,000	18,000	149,000
T-6 Training of University Students	40,000	40,000	40,000	40,000	40,000	80,000	80,000	80,000	80,000	80,000	600,000
2. Education											
E-1 Incorporation of Disaster Management Subjects					35,000	2,000	35,000	2,000	35,000	2,000	111,000
E-2 Promotion of Disaster Education in Basic Education		35,000	2,000	35,000	2,000	35,000	2,000	35,000	2,000	35,000	183,000
E-3 Promotion of Disaster Education in Higher Education			35,000	2,000	35,000	2,000	35,000	2,000	35,000	2,000	148,000
3. Awareness											
A-1 National Disaster Management Exhibition	8,000	8,000	8,000	8,000	8,000	8,000	8,000	8,000	8,000	8,000	80,000
A-2 Awareness Campaign		2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	18,000
4. Promotion of Comprehensive Human Resource Development											
P-1 Enhancement of Coordination	2,000	4,000	2,000	4,000	2,000	4,000	2,000	4,000	2,000	4,000	30,000
P-2 Technical Advisories and Assistances						10,000	10,000	10,000	10,000	10,000	50,000
5. Research											
R-1 Establishment and operation of Library		1,000	1,000	16,000	16,000	16,000	16,000	16,000	16,000	16,000	114,000
R-2 Promotion of Research	10,000	10,000	10,000	50,000	50,000	50,000	50,000	50,000	50,000	50,000	380,000
Total Cost	151,000	206,000	215,000	307,000	384,000	418,000	449,000	418,000	449,000	418,000	3,415,000

* Excluding recurrent costs (salary of staff, office rental, equipment, etc)

(Exchange rate: USD1=PKR88.4)

9.8 Activities by Year

The following table summarizes necessary activities to be implemented by year. Different types and volumes of activities will be implemented from the year 2012 to 2016. After 2017 when the NIDM building is planned to be utilized, the same types and volumes of activities will be implemented every year.

Table III.9 Activities by Year

Year	Activity	Contents
2012	Training	<ul style="list-style-type: none"> Development of Training 2 (Mitigation and Preparedness) for F/G/S/PDMA staff Implementation of Training 2 for F/G/S/PDMA staff (5 days, 20 people) Development of Training 1 (Basic DRM) for DDMA staff Implementation of Training 1 for DDMA staff (5 days, 20 people) Implementation of TOT of Training 1 (DRM) for TMA staff (5 days, 20 people) Implementation of Training 1 (DRM) for university students (2 days, 120 people) (5 times)
	Education	None
	Awareness	<ul style="list-style-type: none"> National disaster management exhibition (1 day, 250 people) (1 time)
	Promotion of Comprehensive Human Resource Development	<ul style="list-style-type: none"> National coordination meeting for human resource development for DRM (1 day, 60 people)
	Research	<ul style="list-style-type: none"> Research fellowship award (small scale, 2 people)
2013	Training	<ul style="list-style-type: none"> Development of Training 1 (DRM) for NDMA staff Implementation of Training 1 for NDMA staff (5 days, 20 people) Development of Training 3 (Emergency Response) for F/G/S/PDMA staff Implementation of Training 3 for F/G/S/PDMA staff (5 days, 20 people) Implementation of Training 1 for DDMA staff (5 days, 20 people) Implementation of TOT of Training 1 for TMA staff (5 days, 20 people) Implementation of Training 1 (DRM) for university students (2 days, 120 people) (5 times)
	Education	<ul style="list-style-type: none"> Development of curriculum of disaster education for basic education (curriculum development and discussion meetings (1 day, 30 people) (5 times))
	Awareness	<ul style="list-style-type: none"> National disaster management exhibition (1 day, 250 people) (1 time) Meeting for promotion of awareness campaign by media (1 day, 30 people) (2 times)
	Promotion of Comprehensive Human Resource Development	<ul style="list-style-type: none"> National coordination meeting for human resource development for DRM (1 day, 60 people)

Year	Activity	Contents
		<ul style="list-style-type: none"> International meeting for human resource development for DRM (1 day, 60 people)
	Research	<ul style="list-style-type: none"> Web-site development and management Research fellowship award (small scale, 2 people)
2014	Training	<ul style="list-style-type: none"> Development of Training 2 (Mitigation and Preparedness) for NDMA staff Implementation of Training 2 for NDMA staff (5 days, 20 people) Implementation of Training 1 for F/G/S/PDMA staff (5 days, 20 people) Implementation of Training 1 for DDMA staff (5 days, 20 people) Implementation of TOT of Training 1 for TMA staff (5 days, 20 people) Development of Training 1 (Basic DRM) for Staff of Federal Ministries Implementation of Training 1 for Staff of Federal Ministries (3 days, 20 people) Implementation of Training 1 for university students (2 days, 120 people) (5 times)
	Education	<ul style="list-style-type: none"> Development of curriculum of disaster education for higher education (curriculum development and discussion meetings (1 day, 30 people) (5 times)) Coordination meeting for disaster education in basic education (1 day, 20 people) (2 times)
	Awareness	<ul style="list-style-type: none"> National disaster management exhibition (1 day, 250 people) (1 time) Meeting for promotion of awareness campaign by media (1 day, 30 people) (2 times)
	Promotion of Comprehensive Human Resource Development	<ul style="list-style-type: none"> National coordination meeting for human resource development for DRM (1 day, 60 people)
	Research	<ul style="list-style-type: none"> Web-site management Research fellowship award (small scale, 2 people)
2015	Training	<ul style="list-style-type: none"> Development of Training 3 (Emergency Response) for NDMA staff Implementation of Training 3 for NDMA staff (5 days, 20 people) Implementation of Training 2 for F/G/S/PDMA staff (5 days, 20 people) Implementation of Training 1 for DDMA staff (5 days, 20 people) (5 times) Implementation of TOT of Training 1 for TMA staff (5 days, 20 people) Implementation of Training 1 for Staff of Federal Ministries (3 days, 20 people) Implementation of Training 1 for university students (2 days, 120 people) (5 times)
	Education	<ul style="list-style-type: none"> Development of curriculum of disaster education for basic education (curriculum development and discussion meetings (1 day, 30 people) (5 times)) Coordination meeting for disaster education in higher education (1 day, 20 people) (2 times)
	Awareness	<ul style="list-style-type: none"> National disaster management exhibition (1 day, 250 people) (1 time) Meeting for promotion of awareness campaign by media (1 day, 30 people) (2 times)
	Promotion of Comprehensive Human Resource Development	<ul style="list-style-type: none"> National coordination meeting for human resource development for DRM (1 day, 60 people) International meeting for human resource development for DRM (1 day, 60 people)
	Research	<ul style="list-style-type: none"> Web-site management Purchase of books and documents for library (15,000 USD per year) Research fellowship award (full scale, 5 people)
2016	Training	<ul style="list-style-type: none"> Implementation of Training 1 for NDMA staff (5 days, 20 people) (1 time) Implementation of Training 3 for F/G/S/PDMA staff (5 days, 20 people) Implementation of Training 1 for DDMA staff (5 days, 20 people) (5 times) Revision of TOT of Training 1 for TMA staff Implementation of TOT of Training 1 for TMA staff (5 days, 20 people) (5 times) Revision of Training 1 for Staff of Federal Ministries Implementation of Training 1 for Staff of Federal Ministries (3 days, 20 people) (2 times) Implementation of Training 1 for university students (2 days, 120 people) (5 times)
	Education	<ul style="list-style-type: none"> Development of curriculum of disaster management subjects for training academies of government officials (curriculum development and discussion meetings (1 day, 30 people) (5 times)) Development of curriculum of disaster education for higher education (curriculum development and discussion meetings (1 day, 30 people) (5 times)) Coordination meeting for disaster education in basic education (1 day, 20 people) (2 times) Preparation of NIDM degree course
	Awareness	<ul style="list-style-type: none"> National disaster management exhibition (1 day, 250 people) (1 time) Meeting for promotion of awareness campaign by media (1 day, 30 people) (2 times)
	Promotion of Comprehensive Human Resource Development	<ul style="list-style-type: none"> National coordination meeting for human resource development for DRM (1 day, 60 people)
	Research	<ul style="list-style-type: none"> Web-site management Purchase of books and documents for library (15,000 USD per year) Research fellowship award (full scale, 5 people)

Year	Activity	Contents
2017	Training	<ul style="list-style-type: none"> • Development of Training 4 (Hazard Specific DRM) for NDMA staff • Implementation of Training 1 for NDMA staff (5 days, 20 people) (1 time) • Implementation of Training 4 for NDMA staff (5 days, 20 people) (1 time) • Revision of Training 1, 2, and 3 for F/G/S/PDMA staff • Implementation of Training 1 for F/G/S/PDMA staff (5 days, 20 people) (2 times) • Implementation of Training 1 for DDMA staff (5 days, 20 people) (5 times) • Implementation of TOT of Training 1 for TMA staff (5 days, 20 people) (5 times) • Implementation of Training 1 for Staff of Federal Ministries (3 days, 20 people) (2 times) • Implementation of Training 1 for university students (2 days, 120 people) (10 times)
	Education	<ul style="list-style-type: none"> • Development of curriculum of disaster education for basic education (curriculum development and discussion meetings (1 day, 30 people) (5 times)) • Coordination meeting for disaster management subjects for training academies of government officials (1 day, 20 people) (2 times) • Coordination meeting for disaster education in higher education (1 day, 20 people) (2 times) • NIDM degree course
	Awareness	<ul style="list-style-type: none"> • National disaster management exhibition (1 day, 250 people) (1 time) • Meeting for promotion of awareness campaign by media (1 day, 30 people) (2 times)
	Promotion of Comprehensive Human Resource Development	<ul style="list-style-type: none"> • National coordination meeting for human resource development for DRM (1 day, 60 people) • International meeting for human resource development for DRM (1 day, 60 people) • Technical advisories to DRM training
	Research	<ul style="list-style-type: none"> • Web-site management • Purchase of books and documents for library (15,000 USD per year) • Research fellowship award (full scale, 5 people)
2018	Training	<ul style="list-style-type: none"> • Development of Training 5 (Master Trainer Course) for NDMA staff • Implementation of Training 1 for NDMA staff (5 days, 20 people) (1 time) • Implementation of Training 5 for NDMA staff (5 days, 20 people) (1 time) • Implementation of Training 2 for F/G/S/PDMA staff (5 days, 20 people) (2 times) • Revision of Training 1 for DDMA staff • Implementation of Training 1 for DDMA staff (5 days, 20 people) (5 times) • Implementation of TOT of Training 1 for TMA staff (5 days, 20 people) (5 times) • Implementation of Training 1 for Staff of Federal Ministries (3 days, 20 people) (2 times) • Implementation of Training 1 for university students (2 days, 120 people) (10 times)
	Education	<ul style="list-style-type: none"> • Development of curriculum of disaster management subjects for training academies of government officials (curriculum development and discussion meetings (1 day, 30 people) (5 times)) • Development of curriculum of disaster education for higher education (curriculum development and discussion meetings (1 day, 30 people) (5 times)) • Coordination meeting for disaster education in basic education (1 day, 20 people) (2 times) • NIDM degree course
	Awareness	<ul style="list-style-type: none"> • National disaster management exhibition (1 day, 250 people) (1 time) • Meeting for promotion of awareness campaign by media (1 day, 30 people) (2 times)
	Promotion of Comprehensive Human Resource Development	<ul style="list-style-type: none"> • National coordination meeting for human resource development for DRM (1 day, 60 people) • Technical advisories to DRM training
	Research	<ul style="list-style-type: none"> • Web-site management • Purchase of books and documents for library (15,000 USD per year) • Research fellowship award (full scale, 5 people)
2019	Training	<ul style="list-style-type: none"> • Revision of Training 1, 2, and 3 for NDMA staff • Implementation of Training 1 for NDMA staff (5 days, 20 people) (1 time) • Implementation of Training 3 for F/G/S/PDMA staff (5 days, 20 people) (2 times) • Implementation of Training 1 for DDMA staff (5 days, 20 people) (5 times) • Revision of TOT of Training 1 for TMA staff • Implementation of TOT of Training 1 for TMA staff (5 days, 20 people) (5 times) • Revision of Training 1 for Staff of Federal Ministries • Implementation of Training 1 for Staff of Federal Ministries (3 days, 20 people) (2 times) • Implementation of Training 1 for university students (2 days, 120 people) (10 times)
	Education	<ul style="list-style-type: none"> • Development of curriculum of disaster education for basic education (curriculum development and discussion meetings (1 day, 30 people) (5 times)) • Coordination meeting for disaster management subjects for training academies of government officials (1 day, 20 people) (2 times) • Coordination meeting for disaster education in higher education (1 day, 20 people) (2 times) • NIDM degree course

Year	Activity	Contents
	Awareness	<ul style="list-style-type: none"> National disaster management exhibition (1 day, 250 people) (1 time) Meeting for promotion of awareness campaign by media (1 day, 30 people) (2 times)
	Promotion of Comprehensive Human Resource Development	<ul style="list-style-type: none"> National coordination meeting for human resource development for DRM (1 day, 60 people) International meeting for human resource development for DRM (1 day, 60 people) Technical advisories to DRM training
	Research	<ul style="list-style-type: none"> Web-site management Purchase of books and documents for library (15,000 USD per year) Research fellowship award (full scale, 5 people)
2020	Training	<ul style="list-style-type: none"> Implementation of Training 2 for NDMA staff (5 days, 20 people) (1 time) Revision of Training 1, 2, and 3 for F/G/S/PDMA staff Implementation of Training 1 for F/G/S/PDMA staff (5 days, 20 people) (2 times) Implementation of Training 1 for DDMA staff (5 days, 20 people) (5 times) Implementation of TOT of Training 1 for TMA staff (5 days, 20 people) (5 times) Implementation of Training 1 for Staff of Federal Ministries (3 days, 20 people) (2 times) Implementation of Training 1 for university students (2 days, 120 people) (10 times)
	Education	<ul style="list-style-type: none"> Development of curriculum of disaster management subjects for training academies of government officials (curriculum development and discussion meetings (1 day, 30 people) (5 times)) Development of curriculum of disaster education for higher education (curriculum development and discussion meetings (1 day, 30 people) (5 times)) Coordination meeting for disaster education in basic education (1 day, 20 people) (2 times) NIDM degree course
	Awareness	<ul style="list-style-type: none"> National disaster management exhibition (1 day, 250 people) (1 time) Meeting for promotion of awareness campaign by media (1 day, 30 people) (2 times)
	Promotion of Comprehensive Human Resource Development	<ul style="list-style-type: none"> National coordination meeting for human resource development for DRM (1 day, 60 people) Technical advisories to DRM training
	Research	<ul style="list-style-type: none"> Web-site management Purchase of books and documents for library (15,000 USD per year) Research fellowship award (full scale, 5 people)
	Training	<ul style="list-style-type: none"> Implementation of Training 3 for NDMA staff (5 days, 20 people) (1 time) Development of Training 4 (Hazard Specific DRM) for F/G/S/PDMA staff Implementation of Training 1 for F/G/S/PDMA staff (5 days, 20 people) (2 times) Implementation of Training 4 for F/G/S/PDMA staff (5 days, 20 people) (1 time) Revision of Training 1 for DDMA staff Implementation of Training 1 for DDMA staff (5 days, 20 people) (5 times) Implementation of TOT of Training 1 for TMA staff (5 days, 20 people) (5 times) Implementation of Training 1 for Staff of Federal Ministries (3 days, 20 people) (2 times) Implementation of Training 1 for university students (2 days, 120 people) (10 times)
2021	Education	<ul style="list-style-type: none"> Development of curriculum of disaster education for basic education (curriculum development and discussion meetings (1 day, 30 people) (5 times)) Coordination meeting for disaster management subjects for training academies of government officials (1 day, 20 people) (2 times) Coordination meeting for disaster education in higher education (1 day, 20 people) (2 times) NIDM degree course
	Awareness	<ul style="list-style-type: none"> National disaster management exhibition (1 day, 250 people) (1 time) Meeting for promotion of awareness campaign by media (1 day, 30 people) (2 times)
	Promotion of Comprehensive Human Resource Development	<ul style="list-style-type: none"> National coordination meeting for human resource development for DRM (1 day, 60 people) International meeting for human resource development for DRM (1 day, 60 people) Technical advisories to DRM training
	Research	<ul style="list-style-type: none"> Web-site management Purchase of books and documents for library (15,000 USD per year) Research fellowship award (full scale, 5 people)
	Training	<ul style="list-style-type: none"> Implementation of Training 3 for NDMA staff (5 days, 20 people) (1 time) Development of Training 4 (Hazard Specific DRM) for F/G/S/PDMA staff Implementation of Training 1 for F/G/S/PDMA staff (5 days, 20 people) (2 times) Implementation of Training 4 for F/G/S/PDMA staff (5 days, 20 people) (1 time) Revision of Training 1 for DDMA staff Implementation of Training 1 for DDMA staff (5 days, 20 people) (5 times) Implementation of TOT of Training 1 for TMA staff (5 days, 20 people) (5 times) Implementation of Training 1 for Staff of Federal Ministries (3 days, 20 people) (2 times) Implementation of Training 1 for university students (2 days, 120 people) (10 times)

APPENDICES

- Appendix 1 List of the Organizations Interviewed regarding Capacity Building on DRM
- Appendix 2 List of Resources for Human Resource Development Activities in the Field of Disaster Management (Not an Exhaustive List)
- Appendix 3 Breakdown of Costs and Sub-activities of Proposed Activities of Comprehensive HRDP

Appendix 1 List of the Organizations interviewed regarding Capacity Building on DRM

SN	Organizations	Location
National Level Government Organizations and Departments		
1	National School of Public Policy(NSPP)	Lahore
2	Flood Forecasting Division (FFD) of PMD	Lahore
3	Weather Forecasting Division of PMD	Lahore
4	Range Forest Research/ Training Institute of National Agriculture Research Center (NARC)	Islamabad
5	Emergency Preparedness Center of Pakistan Institute of Medical Sciences(PIMS)	Islamabad
6	National Disaster Management Authority (NDMA)	Islamabad
7	National Institute of Disaster Management (NIDM)	Islamabad
8	Civil Defense	Islamabad
9	Ministry of Education	Islamabad
10	Institute of Meteorology Geophysics (IMG) of PMD	Karachi
11	Pakistan Academy for Rural Development	Peshawar
Provincial Level Government Organizations/Departments and Training Institutions		
12	Building Control Authority Karachi	Karachi
13	Pakistan Council of Architecture and Town Planning Karachi	Karachi
14	Civil Defense Lahore (Headquarter and District Office)	Lahore
15	Pakistan Provincial Service Academy	Peshawar
16	Punjab Emergency Services (Rescue 1122)	Lahore
17	Punjab Local Government Training Academy	Lela Musa
18	Punjab Constabulary Police	Sheikhupura
19	Lady Reading Hospital Emergency Center	Peshawar
20	Education Department, Punjab Province	Lahore
21	PDMA KP	Peshawar
22	PDMA Baluchistan	Quetta
23	SDMA AJK	Muzafarbad
24	GBDMA	Gilgit
25	PDMA Punjab	Lahore
26	PDMA Sindh	Karachi
27	Dir Lower District	KP
28	Swat District	KP
29	Peshawar District	KP
30	Swabi District	KP
31	Mardan District	KP
32	Manshera District	KP
33	Pishin District	Balochistan
34	Jaffarabad District	Balochistan
35	Quetta District	Balochistan
36	Qila Abdullah District	Balochistan
37	Kech District	Balochistan
38	Khuzdar District	Balochistan
39	Muzafarbad District	AJK
40	Punch District	AJK
41	Bagh District	AJK
42	Kotly District	AJK
43	Skardu District	GB
44	Ghizer District	GB
45	Gilgit District	GB
46	Dimar District	GB
47	Faisalabad District	Punjab
48	Gujranwala District	Punjab
49	Rawalpindi District	Punjab
50	Sialkot District	Punjab

SN	Organizations	Location
51	Muzaffargarh District	Punjab
52	Lahore District	Punjab
53	Hyderabad District	Sindh
54	Mirpur Khas District	Sindh
55	Sanghar District	Sindh
56	Larkana District	Sindh
57	Dadu District	Sindh
58	Karachi District	Sindh
Universities and Research Institutions of Public Sectors		
59	NED University of Engineering and Technology, Town Planning Department	Karachi
60	University of Engineering and Technology of Peshawar, Earthquake Resistance Design, Research Center of Civil Engineering Department	Peshawar
61	NED University of Engineering and Technology, Department of Civil Engineering	Karachi
62	University of Engineering and Technology (UET), Town Planning Department	Lahore
63	University of Engineering and Technology (UET), Sediment Related Technology	Lahore
64	University of Engineering and Technology (UET), Civil Technology	Lahore
Private Sector University and Institutions		
65	Disaster Research Institute (DRI), Preston University	Islamabad
66	International Institute of Disaster Risk Management	Islamabad
International and National NGOs		
67	Oxfam	Hyderabad
68	Save the Children	Hyderabad
69	Sindh Agricultural and Forestry Workers Coordinating Organization	Hyderabad
70	Yar M Samejo Education Society and Development Organization	Naseerabad
71	Sindh Rural Support Organization	Sukkur
72	Pakistan Red Crescent Society (PRCS)	Islamabad
73	Punjab Rural Support Programme (PRSP)	Hafizabad
74	Thardeep Rural Development Program (TRDP)	Tharparkar
75	Edhi Foundation	Karachi
76	MALC Karachi	Karachi
Private Organizations		
77	Disaster Management and Reconstruction Division, NESPAK	Islamabad

**Appendix 2 List of Resources for Human Resource Development Activities
in the field of Disaster Management (Not an Exhaustive List)**

Organization	Area
Governmental Organizations	
NDMA	<ul style="list-style-type: none"> • National disaster risk situation in Pakistan • National disaster management system in Pakistan • Introduction to Hyogo Framework for Action (HFA) and its progress in Pakistan • Experience sharing from recent flood in Pakistan
NIDM	<ul style="list-style-type: none"> • Disaster risk management • Overview of disaster risk assessment • Hazard assessment • Vulnerability and capacity assessment • Concepts of CBDRM • Risk assessment through CBDRM approach • Disaster and development
PDMA Punjab	<ul style="list-style-type: none"> • Disaster risk situation in Punjab Province
PDMA KP	<ul style="list-style-type: none"> • Disaster risk situation in KP Province • Provincial disaster management system • Introduction of emergency response management • Emergency response preparedness and planning • Vulnerability and capacity assessment • Stakeholders awareness on disaster management • Camp management • Relief coordination efforts during recent flood in KP • Conflict analysis • IDP management • Reconstruction and rehabilitation
FATA Disaster Management Authority	<ul style="list-style-type: none"> • Disaster risk situation in FATA
Pakistan Meteorological Department (PMD) (including Flood Forecasting Division (FFD), Weather Forecasting Division, Institute of Meteorology Geophysics (IMG))	<ul style="list-style-type: none"> • Early Warning System • Hydrology • Weather forecasting • Meteorology and forecasting
Federal Flood Commission (FFC)	<ul style="list-style-type: none"> • Policy issues pertaining to flood disaster management • National Flood Protection Plans • Floods/ flash floods disaster management • History and up-to date scientific knowledge of floods/ flash floods
Punjab Emergency Service (Rescue 1122)	<ul style="list-style-type: none"> • Role of emergency services in DM in Punjab Province • Simulation exercise on emergency response • Rescue • First aid • School safety and awareness • Community safety and awareness
Federal Civil Defence Training School	<ul style="list-style-type: none"> • Basic nuclear, biological and chemical warfare • Rescue service • Casualty Service • Firefighters • Fire prevention
National Institute of Fire Technology	<ul style="list-style-type: none"> • Fire prevention
Civil Aviation Training Institute Hyderabad	<ul style="list-style-type: none"> • Rescue (at airport, especially) • Fire fighting (at airport, especially)
Civil Defense Lahore	<ul style="list-style-type: none"> • First aid • Rescue • Fire fighting

Organization	Area
Punjab Constabulary	<ul style="list-style-type: none"> • Emergency response • First aid • Fire fighting • Communication during disaster • Rescue
Punjab Local Government Academy	<ul style="list-style-type: none"> • Disaster management • Mitigation of disaster damage • Communication during disaster
Provincial Service Academy Peshawar	<ul style="list-style-type: none"> • Disaster • CBDRM • Crisis management at district level • Contingency plan at district level
Pakistan Academy for Rural Development (PARD)	<ul style="list-style-type: none"> • Disaster management • Contingency plan at district level • Gender dimension in disaster management • Post disaster health care management • CBDRM
Range Forest Research/ Training Institute, National Agriculture Research Center (NARC) Islamabad	<ul style="list-style-type: none"> • Holding and preserving seed • Planting trees in drought areas • Agro forestry • Desertification • Wild life management
Educational Institutions	
University of Karachi	<ul style="list-style-type: none"> • Flood hazard risk assessment and risk reduction measures • Cyclone hazard risk assessment and risk reduction measures
NED University	<ul style="list-style-type: none"> • Earthquake hazard risk assessment and risk reduction measures • Industrial hazard risk assessment and risk reduction measures • Seismic analysis and design, structural retrofit • Seismic hazard and vulnerability assessment • Geotechnical earthquake engineering • Design of seismic retrofit • Performance based seismic design • Non-linear structural analysis • Tsunami modeling • Tsunami sciences and tsunami introduction • Community participation and motivation for pre and post of tsunami • Mitigation measures against Tsunami
Department of City and Regional Planning, University of Science and Technology Lahore	<ul style="list-style-type: none"> • Relationship between disaster and development • Industrial hazard risk management • Drought hazard risk management
University of Peshawar	<ul style="list-style-type: none"> • Earthquake hazard risk assessment and risk reduction • Design of masonry building for seismic disaster mitigation • Design of bridges for disaster mitigation • Lab and field testing of structures • Quality construction • Material composition against earthquake resistance building • Emergency squad for earthquake disaster
UET Lahore	<ul style="list-style-type: none"> • Seismic resistance structure • Retrofitting of earthquake damaged structures • Ground motion accelerograph and accelerogram • Sediments related issues • City/ regional planning and disaster management

Organization	Area
NUST Islamabad	<ul style="list-style-type: none"> • Climate Change • Hydrology and Hydro-dynamics • Environment and Environmental Conservations • Rainfall & Runoff Modeling • Flood Routing and Simulation • Digital Signal Processing & Communication Systems • Water Resources Management • Disaster Mitigation & Reconstruction • Disaster Management
Comsats Islamabad	<ul style="list-style-type: none"> • Meteorology • Computer Sciences • Energy Management • Project Management • Remote Sensing and GIS
PIEAS Islamabad	<ul style="list-style-type: none"> • Environmental Sciences • Radiological Engineering • Fluid Dynamics
Quaid-i-Azam University Islamabad	<ul style="list-style-type: none"> • Earthquake Seismology • Hydrogeology • Remote Sensing • Environmental Sciences
Disaster Research Institute (DRI), Preston University	<ul style="list-style-type: none"> • Earthquake • Environment and disaster • Disaster management
International Institute for Disaster Risk Management	<ul style="list-style-type: none"> • Awareness • First aid • Prevention measures of earthquake • Rescue • Casualty handling • How to transport injured people • Concept of flood
Medical Institutions	
Lady Reading Hospital	<ul style="list-style-type: none"> • Basic life support concept of disaster • Triage communication • Treatment at initial phase • Transportation in emergency • Management of dead victims
National Health Emergency Preparedness and Response Center, Pakistan Institute of Medical Science	<ul style="list-style-type: none"> • First aid measures at disaster spot • Type of injuries and severity • Shifting patients from disaster site to hospital • Mobile X-ray • Injection • Lab tests • Life support at initial stage • How to manage patients with limited resources • Lady health worker for safer delivery • How to deal with people under pressure in disaster
International Organizations	
UNDP	<ul style="list-style-type: none"> • Concept and process of preparedness planning • DRM planning at district level
Early Recovery Program, UNDP Muzaffarabad	<ul style="list-style-type: none"> • Landslide hazard risk assessment and risk reduction
Crisis Prevention and Recovery Unit, UNDP Islamabad	<ul style="list-style-type: none"> • Industrial hazard risk assessment and risk reduction measures • Mainstreaming DRR into development process
UNIFEM	<ul style="list-style-type: none"> • Mainstreaming gender into disaster risk management
Integrated in-service teacher and	<ul style="list-style-type: none"> • SPHERE standards for emergency response

Organization	Area
supervision project, GTZ Lahore	
Basic Education Project, CIDA	<ul style="list-style-type: none"> • Gender focused disaster risk reduction
Private Sector	
NESPAK	<ul style="list-style-type: none"> • Introduction of disasters • Hazard based land use management • Local hazard zoning • Seismic hazard micro zonation studies • Social disaster management • Hydrological disaster studies • GIS based disaster risk reduction analyses • Vulnerability and capacity analyses
NGOs	
Pakistan Red Crescent Society (PRCS)	<ul style="list-style-type: none"> • Community based disaster risk management • Public awareness • Early warning system with focus on flooding • Community disaster awareness • School disaster awareness • First aid • Emergency response by community volunteers
Tardeep Rural Development Program (TRDP)	<ul style="list-style-type: none"> • Drought hazard risk assessment and risk reduction measures • Early warning of drought • Planning for community risk reduction and preparedness
Corporate Sector Karachi	<ul style="list-style-type: none"> • Hazard/Vulnerability/Capacity Assessment • Emergency response management
Network for Human and Social Development, Islamabad	<ul style="list-style-type: none"> • Mainstreaming gender into disaster risk management
DRR and Climate Risk Management, Oxfam GB Islamabad	<ul style="list-style-type: none"> • Climate risk management
Punjab Rural Support Program (PRSP)	<ul style="list-style-type: none"> • Community activist • Community development and disaster • Emergency response and infrastructure development
Sindh Rural Support Organization	<ul style="list-style-type: none"> • Disaster awareness • Health awareness, sanitation and education with regard to disaster
Sindh Agriculture and Forestry Worker Coordinating Organization (SAFWCO)	<ul style="list-style-type: none"> • CBDRM • Pre and post disaster measures • What should be done during disasters • Preparation of disaster management plan • Firefighting
Edhi Welfare Center Karachi	<ul style="list-style-type: none"> • Cardiac First Response (CFR) • Emergency First Response (EFR) • First aid • Prioritization of injured people
Marie Adelaide Leprosy Center (MALC)	<ul style="list-style-type: none"> • Public awareness of nature of disaster • Community emergency response • Communication and coordination with related organizations at emergency

Appendix 3 Breakdown of costs and sub-activities of proposed activities of comprehensive HRDP

Breakdown of Costs of Proposed Activities of Comprehensive HRDP

Activity	Responsible Organization	Cost in thousands USD	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
1-3 Enhancement of coordination and partnership	NIDM	30	2	4	2	4	2	4	2	4	2	4
1-6 Establishment of library	NIDM	110		1	1	16	16	16	16	16	16	16
1-7 Promotion of research	NIDM	380	10	10	10	50	50	50	50	50	50	50
2-1 DRM courses for NDMA, PDMA, and DDMA staff	NIDM	1,290	76	91	68	126	103	190	168	153	152	167
2-2 Capacity enhancement of urban search and rescue teams	City District Governments	2,320	232	232	232	232	232	232	232	232	232	232
2-3 Implementation of regular refresher training for district fire brigades	Provincial Firebrigade, Provincial Civil Defence	4,360	436	436	436	436	436	436	436	436	436	436
2-4 DRM workshops for TMA staff	NIDM, DDMA	4,470	131	131	131	131	665	653	653	665	653	653
3-1 DRM workshops for relevant ministries	NIDM	170	-	-	32	9	30	18	18	30	18	18
3-2 DRM workshops for relevant departments of provincial governments	F/G/S/PDMAs	130	-	-	-	-	-	26	26	26	26	26
3-3 DRM workshops for district governments	DDMA	2,180	-	-	-	-	-	436	436	436	436	436
3-4 DRM subjects into curriculum of government training institutes	NIDM	110	-	-	-	-	35	2	35	2	35	2
4-1 DRM workshops for community leaders	DDMA, NGO	13,080	1,308	1,308	1,308	1,308	1,308	1,308	1,308	1,308	1,308	1,308
4-2 Search and rescue training for members of community emergency response teams	District Firebrigade, District Civil Defence, NGO	13,080	1,308	1,308	1,308	1,308	1,308	1,308	1,308	1,308	1,308	1,308
5-1 Awareness campaigns	NIDM, F/G/S/PDMAs, DDMA, TMA	940	94	94	94	94	94	94	94	94	94	94
5-2 Promotion of disaster education at schools	NIDM, Provincial Education Department	180	-	35	2	35	2	35	2	35	2	35
5-3 Promotion of disaster education in higher education	NIDM, Provincial Education Department	750	40	40	75	42	75	82	115	82	115	82
Total		approx 43,580 (43.58 million USD)										

Note: Costs in the table above only include activity costs. (i.e., excluding USD 20.7 million as cost for the construction of NIDM building)

Breakdown of Sub-Activities of Proposed Activities of Comprehensive HRDP (2012-2016)

Activity	Responsible Organization	2012	2013	2014	2015	2016
1-3 Enhancement of coordination and partnership	NIDM	* National conference	* National conference * International conference	* National conference	* National conference * International conference	* National conference
1-6 Establishment of library	NIDM	-	* Website establishment	* Website maintenance	* Website maintenance * Purchase of books and documents	* Website maintenance * Purchase of books and documents
1-7 Promotion of research	NIDM	* Award of research fellowship	* Award of research fellowship	* Award of research fellowship	* Award of research fellowship	* Award of research fellowship
2-1 DRM courses for NDMA, PDMA, and DDMA's staff	NIDM	* Development of training for PDMA * Training for PDMA * Development of training for DDMA * Training for DDMA	* Development of training for NDMA * Training for NDMA * Development of training for PDMA * Training for PDMA * Training for DDMA	* Development of training for NDMA * Training for NDMA * Training for PDMA * Training for DDMA	* Development of training for NDMA * Training for NDMA * Training for PDMA * Training for DDMA	* Training for NDMA * Training for PDMA * Training for DDMA (5 times)
2-2 Capacity enhancement of urban search and rescue teams	City District Governments	* Training of urban search and rescue team (2 cities)	* Training of urban search and rescue team (2 cities)	* Training of urban search and rescue team (2 cities)	* Training of urban search and rescue team (2 cities)	* Training of urban search and rescue team (2 cities)
2-3 Implementation of regular refresher training for district fire brigades	Provincial Firebrigade, Provincial Civil Defence	* Refresher training of district firebrigades (30 districts)	* Refresher training of district firebrigades (30 districts)	* Refresher training of district firebrigades (30 districts)	* Refresher training of district firebrigades (30 districts)	* Refresher training of district firebrigades (30 districts)
2-4 DRM workshops for TMA staff.	NIDM, DDMA	* Training of trainers (TOT) * Training for TMA (10 districts)	* TOT * Training for TMA (10 districts)	* TOT * Training for TMA (10 districts)	* TOT * Training for TMA (10 districts)	* Revision of TOT * TOT (5 times) * Training for TMA (50 districts)
3-1 DRM workshops for relevant ministries	NIDM	-	-	* Development of training * Training for federal ministries	* Training for federal ministries	* Revision of training * Training for federal ministries (2 times)
3-2 DRM workshops for relevant departments of provincial governments.	PDMA	-	-	-	-	-
3-3 DRM workshops for district governments.	DDMA	-	-	-	-	-
3-4 DRM subjects into curriculum of government training institutes	NIDM	-	-	-	-	* Development of curriculum of disaster management subjects
4-1 DRM workshops for community leaders.	DDMA, NGO	* DRM workshop for community leaders (all districts)	* DRM workshop for community leaders (all districts)	* DRM workshop for community leaders (all districts)	* DRM workshop for community leaders (all districts)	* DRM workshop for community leaders (all districts)
4-2 Search and rescue training for members of community emergency response teams.	District Firebrigade, District Civil Defence, NGO	* Search and rescue training for community emergency response teams (all districts)	* Search and rescue training for community emergency response teams (all districts)	* Search and rescue training for community emergency response teams (all districts)	* Search and rescue training for community emergency response teams (all districts)	* Search and rescue training for community emergency response teams (all districts)
5-1 Awareness campaigns	NIDM, PDMA, DDMA, TMA	* National disaster management exhibition * Awareness campaign at federal level * Awareness campaign at provincial level (all provinces) * Awareness campaign at district level (all districts)	* National disaster management exhibition * Awareness campaign at federal level * Awareness campaign at provincial level (all provinces) * Awareness campaign at district level (all districts)	* National disaster management exhibition * Awareness campaign at federal level * Awareness campaign at provincial level (all provinces) * Awareness campaign at district level (all districts)	* National disaster management exhibition * Awareness campaign at federal level * Awareness campaign at provincial level (all provinces) * Awareness campaign at district level (all districts)	* National disaster management exhibition * Awareness campaign at federal level * Awareness campaign at provincial level (all provinces) * Awareness campaign at district level (all districts)
5-2 Promotion of disaster education at schools	NIDM, Provincial Education Department	-	* Development of curriculum of disaster education	* Coordination meeting (2 times)	* Development of curriculum of disaster education	* Coordination meeting (2 times)
5-3 Promotion of disaster education in higher education	NIDM, Provincial Education Department	* Training for university students (5 times)	* Training for university students (5 times)	* Training for university students (5 times) * Development of curriculum of disaster education	* Training for university students (5 times) * Coordination meeting (2 times)	* Training for university students (5 times) * Development of curriculum of disaster education

Breakdown of Costs and Sub-Activities of Proposed Activities of Comprehensive HRDP (2017-2021)

Activity	Responsible Organization	2017	2018	2019	2020	2021
1-3 Enhancement of coordination and partnership	NIDM	* National conference * International conference	* National conference	* National conference * International conference	* National conference	* National conference * International conference
1-6 Establishment of library	NIDM	* Website maintenance * Purchase of books and documents	* Website maintenance * Purchase of books and documents	* Website maintenance * Purchase of books and documents	* Website maintenance * Purchase of books and documents	* Website maintenance * Purchase of books and documents
1-7 Promotion of research	NIDM	* Award of research fellowship	* Award of research fellowship	* Award of research fellowship	* Award of research fellowship	* Award of research fellowship
2-1 DRM courses for NDMA, PDMA, and DDMA staff	NIDM	* Development of training for NDMA * Training for NDMA (2 times) * Revision of training for PDMA * Training for PDMA (2 times) * Training for DDMA (5 times)	* Development of training for NDMA * Training for NDMA (2 times) * Training for PDMA (2 times) * Revision of training for DDMA * Training for DDMA (5 times)	* Revision of training for NDMA * Training for NDMA * Training for PDMA (2 times) * Training for DDMA (5 times)	* Training for NDMA * Revision of training for PDMA * Training for PDMA (2 times) * Training for DDMA (5 times)	* Training for NDMA * Development of training for PDMA * Training for PDMA (3 times) * Revision of training for DDMA * Training for DDMA (5 times)
2-2 Capacity enhancement of urban search and rescue teams	City District Governments	* Training of urban search and rescue team (2 cities)	* Training of urban search and rescue team (2 cities)	* Training of urban search and rescue team (2 cities)	* Training of urban search and rescue team (2 cities)	* Training of urban search and rescue team (2 cities)
2-3 Implementation of regular refresher training for district fire brigades	Provincial Firebrigade, Provincial Civil Defence	* Refresher training of district firebrigades (30 districts)	* Refresher training of district firebrigades (30 districts)	* Refresher training of district firebrigades (30 districts)	* Refresher training of district firebrigades (30 districts)	* Refresher training of district firebrigades (30 districts)
2-4 DRM workshops for TMA staff.	NIDM, DDMA	* TOT (5 times) * Training for TMA (50 districts)	* TOT (5 times) * Training for TMA (50 districts)	* Revision of TOT * TOT (5 times) * Training for TMA (50 districts)	* TOT (5 times) * Training for TMA (50 districts)	* TOT (5 times) * Training for TMA (50 districts)
3-1 DRM workshops for relevant ministries	NIDM	* Training for federal ministries (2 times)	* Training for federal ministries (2 times)	* Revision of training * Training for federal ministries (2 times)	* Training for federal ministries (2 times)	* Training for federal ministries (2 times)
3-2 DRM workshops for relevant departments of provincial governments.	PDMA	* Training for provincial governments (3 provinces)	* Training for provincial governments (3 provinces)	* Training for provincial governments (3 provinces)	* Training for provincial governments (3 provinces)	* Training for provincial governments (3 provinces)
3-3 DRM workshops for district governments.	DDMA	* Training for district governments (50 districts)	* Training for district governments (50 districts)	* Training for district governments (50 districts)	* Training for district governments (50 districts)	* Training for district governments (50 districts)
3-4 DRM subjects into curriculum of government training institutes	NIDM	* Coordination meeting (2 times)	* Development of curriculum of disaster management subjects	* Coordination meeting (2 times)	* Development of curriculum of disaster management subjects	* Coordination meeting (2 times)
4-1 DRM workshops for community leaders.	DDMA, NGO	* DRM workshop for community leaders (all districts)	* DRM workshop for community leaders (all districts)	* DRM workshop for community leaders (all districts)	* DRM workshop for community leaders (all districts)	* DRM workshop for community leaders (all districts)
4-2 Search and rescue training for members of community emergency response teams.	District Firebrigade, District Civil Defence, NGO	* Search and rescue training for community emergency response teams (all districts)	* Search and rescue training for community emergency response teams (all districts)	* Search and rescue training for community emergency response teams (all districts)	* Search and rescue training for community emergency response teams (all districts)	* Search and rescue training for community emergency response teams (all districts)
5-1 Awareness campaigns	NIDM, PDMA, DDMA, TMA	* National disaster management exhibition * Awareness campaign at federal level * Awareness campaign at provincial level (all provinces) * Awareness campaign at district level (all districts)	* National disaster management exhibition * Awareness campaign at federal level * Awareness campaign at provincial level (all provinces) * Awareness campaign at district level (all districts)	* National disaster management exhibition * Awareness campaign at federal level * Awareness campaign at provincial level (all provinces) * Awareness campaign at district level (all districts)	* National disaster management exhibition * Awareness campaign at federal level * Awareness campaign at provincial level (all provinces) * Awareness campaign at district level (all districts)	* National disaster management exhibition * Awareness campaign at federal level * Awareness campaign at provincial level (all provinces) * Awareness campaign at district level (all districts)
5-2 Promotion of disaster education at schools	NIDM, Provincial Education Department	* Development of curriculum of disaster education	* Coordination meeting (2 times)	* Development of curriculum of disaster education	* Coordination meeting (2 times)	* Development of curriculum of disaster education
5-3 Promotion of disaster education in higher education	NIDM, Provincial Education Department	* Training for university students (10 times) * Coordination meeting (2 times)	* Training for university students (10 times) * Development of curriculum of disaster education	* Training for university students (10 times) * Coordination meeting (2 times)	* Training for university students (10 times) * Development of curriculum of disaster education	* Training for university students (10 times) * Coordination meeting (2 times)