District Disaster Risk Management Plan





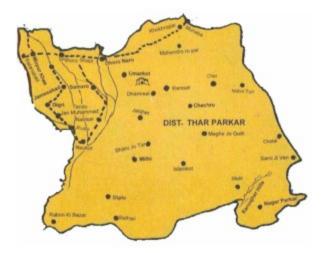






District Disaster Risk Management Plan

District Tharparkar





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District Disaster Risk Management Plan

District Tharoarkar

Table of Contents

Foreword	5
Message	7
Terms and Concepts	8
Vision, Mission and Objectives	13
Acknowledgement	14
List of Acronyms	15
Distribution List	16
Section No. 1	17
Overview of Tharparkar district	17
1.1. Geography	17
1.2. Demography	18
1.3. Economy	19
1.4. Society	21
1.5. Administrative System	22
Section No. 2	23
Disaster Risks in District Tharparkar	23
2.1. Vulnerable Areas	23
2.2. Hazards	24
2.3. Disaster Trends	24
2.4. Institutional Capacity	24
Section No. 3	26
Priority Strategies for Disaster Risk Management	26
3.1. Institutional Arrangements	26
3.1.1. Establishment of District Emergency Operations Centre	27
3.2. Risk Assessment	29
3.3. Training, Education and Awareness	30
3.4. Community Based Disaster Risk Management	31
3.5. Multi Hazards Early Warning System	32
Section No. 4	35
Structure for Disaster Risk Management and Key Stakeholders	35
4.1. District Disaster Management Authority	35
4.1.1. Key functions of DDMA as specified in NDMO 2006	35
4.1.2. Taluka Structures and Responsibilities	36
4.1.3. Union Council	37
4.2. Responsibilities and Duties of Key Stakeholders	38
4.2.1. General Responsibilities	38
4.2.2. Specific Responsibilities	39
4.2.3. Other Organizations	46
4.3. Mid Term Action Plan	49
Section No. 5	52
Standard Operating Procedures (SOPs)	52
 5.1. District Disaster Risk Management Plan 	52
5.1.2. District Disaster Management Authority	52
5.1.3. District Emergency Operations Centre (DEOC)	52
5.2. Warning Mechanism	53

District Tharparkar

District Disaster Risk Management Plan

5.3. Public Information	53
5.4. Request for Assistance	54
5.5. Revenue Department	54
5.6. Health Department	54
5.7. Agriculture Department	54
5.8. Works and Services	55
5.9. Police55	
5.10. Irrigation & Drain	55
5.11. Information Management	55
5.12. Simulation and drills	56
Section No. 6	57
Conclusion	57
Section No. 7	58
Annexes	58
Part (1). District Information	58
Annex 1	58
Annex 2	59
Annex 3	60
Annex 4	61
Part (2). Miscellaneous	64
Annex 5	64
Annex 6	65
Annex 7	67
Annex 8	69
Section No. 8	71
Sources and References	71

Foreword

South Asia has one of the largest concentrations of the poor in the world. Nearly a billion people in about 180 million households are constrained to live in abject poverty. Pakistan is no exception and it is seen that absolute poverty is experienced by about 30.6% of Pakistan's population with a national poverty line of Rs. 670 per capita per month in 1998-1999¹.

Since the beginning of the history man has struggled against the elemental forces of nature to establish his mastery over the environment. Although, science and technology have made tremendous strides in the present century, the struggle has not ceased. Many regions of the country are vulnerable to natural disasters and are becoming increasingly vulnerable. The past decade has witnessed an extra ordinary increase in the number and extent of natural disasters. Natural disasters devastate the lives and livelihoods of people and cause substantial dents in the economies. The impact of hazards is severe on the large numbers of populations living in poverty, in hazard prone areas under extremely vulnerable conditions.

It is estimated that almost 3 million people have perished as a result of natural disasters in the past three decades while 10 of millions have suffered hardship (UN 1997). Things appear to be getting worse in two ways: natural disasters appear to be becoming more frequent and there effects more severe. Poverty is a multi-dimensional problem involving income, consumption, nutrition, health, education, housing, crisis coping capacity, access to credit and other aspects of living. Poverty is about empowerment². It is further aggravated when an unexpected disaster takes place and brings about irrevocable havoc unforgettable till generations.

The poor are most likely to suffer from major disasters and the least likely to be ensured against losses. Is the disaster situation improving over time and do the numbers of disasters show any declining trend over the years? The answer seems to be negative. On the other hand, rapid population growth, unplanned development or lack of planning in human settlements, the constant use of environment and its resources has inevitably resulted in certain changes in the ecology and with changing environment changes.

The nature and intensity of natural disasters has changed considerably. Disaster risk management tries to address hazard risks as an integral part of development. Consequently, it is less events and more process focused. It is based on a continuous assessment of vulnerabilities and risks and involves many actors and stakeholders, such as governments, technical experts and local communities (UNISDR 2004). The

¹Pakistan Human Condition Report, CPRID (Jan-June 2002)

²Report of the 3-day International Workshop on Post Micro credit +5 and Sustainable Development Summits: the way forward

District Disaster Risk Management Plan

Disaster Management Ordinance 2006 requires that District Government must prepare a plan for Disaster Risk Management in its administrative jurisdiction. The District Disaster Risk Management Plan (DDRMP) addresses the districts' response to disaster situations such as earthquakes, floods, cyclones, epidemics, off-site industrial disasters and roads accidents and fires. Some of these disasters such as floods and earthquakes affect large areas causing extensive damage to life, property and environment while others such as epidemics only affect large populations.

In any case, the management of these disasters requires extensive resources and manpower for containment by remedial action. The insight in to the history of disasters in the district specifically and the region in general is very important. The history of disasters helps to give a direction to think upon. In nutshell, history of disasters of the district indicates about the areas, which immediately needs to think upon. Such as history of Tharparkar district, clearly tells that Droughts are on top priority. But it does not mean that if any disaster that did not happen in the past may not happen in future also.

District Disaster Risk Management Plan District Tharparkar is a multi-hazard response plan for the disasters and outlines the institutional framework required for managing such situations. However, the plan assumes a disaster specific form in terms of the actions to be taken by the various agencies involved in the disaster. The front-end or local level of any disaster response organization will differ depending upon the type of disaster, but at the level of the back-end i.e., at the controlling level at the district it will almost remain same, for all types of disasters.

Sualeh Ahmed Farooqui Director General PDMA Sindh

Message

Development of District Disaster Risk Management Plan for district Tharparkar with the support of United Nations Development Programme and National Disaster Management Authority is one of the remarkable achievements of district administration Tharparkar which supported it from pillar to post in the development process.

The District Disaster Risk Management Plan aims at building the capacities of communities making them able to minimize vulnerabilities at their own ends. The plan illustrates the ongoing developments in disaster management through which the government, business community and civil society together taken joint ventures measures to reduce the impacts of disasters on the fabric of society. This will be more beneficial and replicable in establishing early warning systems, preparedness programmes and adaptation of practical measures for copping up in future risks.

I congratulate United Nations Development Programme (UNDP) and National Disaster Management Authority (NDMA) and its teams for development of such a substantial and valuable document. Special words of thanks for Mr. Shalim Kamran, Mr. Amjad Gulzar, Mr. Ghulam Ullah Jarwar and Mr. Khalid Watoo for their contribution to develop this plan. I am confident that the guidelines expounded in the plan will provide utmost benefit to vulnerable communities of district Tharparkar.

Makhdoom Shakeel Uz Zaman District Coordination Officer Tharparkar

Terms and Concepts¹

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 personal 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 state 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

¹These terms and concepts have been adapted from the United Nations international Strategy for Disaster Reduction (UNISDR) list of terms and concepts. An effort has been made to simplify them for better understanding of the common reader in Pakistan.

combination of hazards, conditions of vulnerability and insufficient capacity to reduce the potential negative consequences of risk.

Disaster risk management

The comprehensive approach to reduce the adverse impacts of a disaster. It 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 risk 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

A 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 behaviour.

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 analysing 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 to the impact of hazards.

Wild land fire

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

Vision, Mission and Objectives

Vision

Disaster resistant Tharparkar District

Mission

To protect human life, property and the environment from natural as well as manmade disaster through awareness, mitigation preparedness and coordination.

Objectives

To contribute achievement of sustainable development through minimized human suffering, loss and damage to the economic infrastructure by promoting and strengthening district level capacities for disaster management to localize disaster to the maximum extent possible so as to minimize the impact on life, livelihood and environment.

Acknowledgement

District Disaster Risk Management Plan is the outcome of extensive and laborious process of consultation with District Administration, Local Government Bodies, Civil Society Organizations, Academia, Intelligentsia, media representatives and politicians who provided their valuable input during consultative meetings and individual interviews for the development of this historical document. Special thanks go to the following in this regard for support and input:

- 1. District Nazim
- 2. District Coordination Officer
- 3. District Police Officer
- 4. Executive District Officer Revenue
- 5. Executive District Officer Health
- 6. Executive District Officer Agriculture
- 7. Executive District Officer Education
- 8. Executive District Officer CDD
- Executive District Officer Works & Services
- 10. Thardeep Rural Development Program

List of Acronyms

CP Contingency Plan
DA District Administration
DCO District Coordination Officer

DECO District Emergency Operations Center

DDO Deputy District Officer

DDMA District Disaster Management authority
DDRMP District Disaster Risk Management Plan

DG District Government
DM Disaster Management

DO District Officer

DPOD Dhoro Puran Outfall Drain
DP Disaster Preparedness
DRR Disaster Risk Reduction
EDO Executive District Officer
HR Humanitarian Response

INGO International Non-governmental-organization

KPOD Kadhan Pateji Outfall Drain LBOD Left Bank Outfall Drain

LBCAWB Left Bank Canals Area Water Board LGFW Local Government Frame Work

NDMA National Disaster Management Authority NDMO National Disaster Management Ordinance

NGO Non-Governmental Organization

PDMA Provincial Disaster Management Authority

PH Public Health

TMA Taluka Municipal Administration

UNDP United Nations Development Programme

Distribution List

- National Disaster Management Authority (NDMA)
- Provincial Disaster Management Authority (PDMA)
- United Nations Development Programme Pakistan (UNDP)
- District Nazim, Tharparkar
- District Coordination Officer, Tharparkar
- 6. Taluka Nazim Tharparkar
- Taluka Nazim Talhar
- Taluka Nazim Tando Bago
- Taluka Nazim Shaheed Fazil Rahoo
- 10. EDO Health
- 11. EDO Education
- 12. EDO Agriculture & Livestock
- 13. EDO Works & Communications
- 14. Civil Defence
- 15. Local NGOs

Planning Authority

District Disaster Management Authority

Amendments to the Plan

Any amendments to the plan proposed by the DDMA will be put before the District Council for approval and incorporation.

Review and Updates

The plan shall be revised on yearly basis to incorporate any changes according to the existing situation and circumstances.

Section No. 1

Overview of Tharparkar district

1.1. Geography

In 1843, when Sir Charles Napier become victor of Sindh, the geographical region of Tharparkar was merged into Katchh political agency & Hyderabad Collectorate. Subsequently, in 1860, it was renamed as "Eastern Sindh Frontier" with its Headquarters at Umerkot, headed by Political Superintendent. In 1882, it was renamed as District with Deputy Commissioner as its administrative head. Lastly in 1906, headquarters of the District was shifted from Umerkot to Mirpurkhas. In December 1990, this region was split into districts, "Thar" and "Mirpurkhas", with headquarters of both districts at Mithi. In October 1993, both "Thar" and



"Mirpurkhas" were once again converged into one single district "Tharparkar". This district's name is symptomatic of its geographical conditions i.e. Thar & Parker. Thar means dessert while Parker means rocky & hilly. Ninety five percent of entire population of Tharparker depends on cultivation and cattle, while remaining five percent earns its livelihood through engaging in small business like Shopkeeping and manufacturing handmade carpets.

A huge area of this district is desert (except a small portion on 65636 acres). There is only one crop in whole year in desert area, which also depends on rain. Rain is expected in June, July & August. When sowing season commences for maturity of crops, additional rain is needed else crop will dry & will be of no use. People of this area are confronting the menace of drought consistently after one or two years. In the event of occurrence of a drought, people along with their cattle, start migrating to other districts because of starvation. There are 36,56,933 cattle heads according to census of 1995-96 which is the largest out of all districts in Sindh. In case of receiving sufficient rainfall, like in Monsoon, the desert depicts, classic green & beautiful look, lifting the morale and the mood of its natives in the process. People from various places come here, particularly to Nangarparkar, for tourism. which place is worth to stay and live. The economic condition of the district is totally dependent on rain, as

without it, poverty is the face of the people of Tharparkar. Therefore, it is safe to say, that Tharparkar is not only the biggest district of Sindh, but also its most backward district.

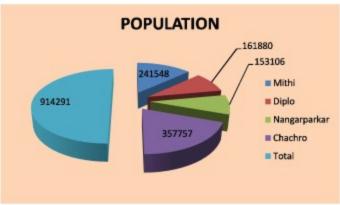
LOCATION OF DISTRICT

The Headquarter of this District is Mithi town, which is situated at a distance of 150 kilometers South-East of Mirpurkhas. It is situated in 24-26 North latitude and 69-51 East longitude.

1.2. Demography

This district is spread over an area of 47, 91,025 acres (19,638 Square Kms) with population of 9, 14,291 souls (according to census 1998). Tharparkar district consists of four Talukas. Taluka wise area and population is as under:





Tharparkar has four talukas; Mithi, Diplo, Nangarparkar and Chachro, comprising on 2,438 villages with 44 Union Councils.

BOUNDRIES

North: Mirpurkhas & Umerkot District

East: Barmer and Jeesairmir Districts of India.

West: District Badin.
South Runn of Kutch.

DENSITY 46. 17 per Sq: Kms.

A. Desert area (in acres) 47. 31, 089
B. Barrage area (in acres) 59. 936

TOTAL 47. 91. 025. (19. 658 Sq: Kms)

1.3. Economy

The head crofts of a country represent its culture. This rich in this field were Shawls (Skills, wools, cotton etc). Hand made bed sheets, hand made, Khes of Goat & Camel hair skin. Very beautiful embroidery of all kinds, Gajas, Blankets, from sheep wool & rallies (quilt) are main artisans skills is available in this district also silver /Gold ornameds very beautiful hand made carpets of the exports quality at price from Rs. 200 – per sq: feet to Rs 500/- per sq: feet single & double knotted are made and sold at Karachi and also exported to foreign. No scientific study, patronage from govt: has been provided. It warrants all special attention of Govt. to promote its sector.

This district is very rich in mineral resources like china clay, granite, coal and salt. Tharparkar cool field is spread over 9000 sq: Kms nears Islamkot to Mithi. It is one of largest lignite (coal) deposit in the world which constitutes about 80% of the coal deposits of country. Coal deposit estimated 2000, billon to the Government had intention to setup power generating palm based on coal minerals at Tharparkar and Karachi, but this project is now on dormant, Coal in Tharparkar was discovered in the year 1991 during joint survey of United States Geological Survey and Geological Survey of Pakistan. Coal deposits is enough to meet fuel requirements of the country for centuries as opine by experts.







Granite rock foundations found in Nangarparkar region of Tharparkar which is generally famous as Karoonjhar Mountain. It is estimated that 3.6 millions tons granite is available at 35 pockets spreads over an area of 125 sq: Kms. It is beautiful and costly stone of brownish color. But due to no communication facilities it is taken in limited quantity. According to opinion of expert, China like Clay found in Nangarparkar (Thar) is comparable in all respect to be imported one china like Clay deposit are estimated over 4 millions tones Apart from this Salt mines are in Dipo Tahsil which have vast deposits of raw salt .

Presently there is no industry in the whole this district although District is rich from mineral resources as indicate above. There is therefore great scope for certain industries like (a) Ceramic (b) Bone crushing industry (c) Gowar – gum Industry (d) Weel Industry (e) Soda Ash Industry (f) Tann3eries industry (g) Caster Industry (h) Glass Industry

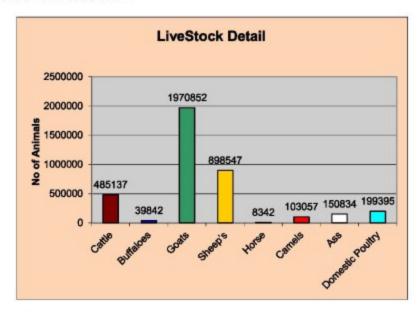
This District is poor in agriculture sector as it mostly depends on rain apart from some area in Nangarparkar, which gets its water from tube wells. There are two dehs of Mithi and seven dehs of Diplo talukas, which are irrigated by Runn shakh. Rest of 157dehs are in arid zone where cultivation depends upon rain. Since it is desert, sweet water is scarce throughout except at a few places like Chachro and Nangarparkar. People consume saltish water, which results in many diseases like T.B. etc. Drought/Famine recurs after every two or three years when there is no rain. Drought is therefore, a fate that people living in arid zones can't escape from. Kasbo village, located in Nangarparkar, is somewhat fertile, as various crop like Onion, Wheat, Cotton, Garden, and other vegetables are grown over there through tube wells. The common plants of the desert are Thuhar, Akk, Nim, Babul, Kumbhat, Gugral, Bed Mushakker, Cherry, (Ber), Kandi, and Rohiro.

Nature has gifted this district with beautiful species of birds and animals. Beautiful birds like Peacock, Haro, Bustard, are found. Others bird are Sauirs, Eagle, Falcon, partridges, Owl, Indian Scoops owl Dove, Cuckoo and Spolted Sand groups. In Chachro, water birds such as White Storck and Riad birds are available. Animals such Deer, Chinkoras, Desert Fox, Kackal Hyen, & Mogoos are available. In this district, poisnous snakes like viz khapar cobra, Hankhan and other varieties are generally found in rainy seasons, indicated by the number of snake bite cases registered in rainy seasons.





This district is rich in livestock sector. According to census of livestock 1996, the position is reflected below:



LAND UNDER FOREST

S/No.	Taluka	Area (Acres)	
1	Mithi	3,325	
2	Diplo	9,726	
3	Chachro	9,058	
4	Nangarparkar	8,215	
	TOTAL FOREST LAND	2.30.324	

1.4. Society

The people of this area live in harmony since ages, following are the casts which inhabits the district

Muslims: Syed, Nohri, Rahma, Sameja, Soomra, Halepota, Hingorja, Juneja, Lanja, Sama, Khaskheli, Memon, Bajeer, Rind, Khosa, Dal, Pinjara, Parha, Mingria, Sheedi, Sangrasi, Khokhar, Miyana, Raja, Mehar, Panhwar, Candia, Nareja, Faqeer, Chohan, Sand, Dhoat, Theba, Kumbhar.

District Disaster Risk Management Plan

Non Muslim: Brahman, Lohana, Maheshwari, (Kirar), Sonara, Soother, Malhi, Rajput (Thakar), Oad, Darzi, Khatri, Bawa, Virtia, Hindu Nai, Lohar, Bheel, Menghwar, Kolhi, and Bhangi, (Bajeer is common cast in Muslims and Hindu).

LITERACY	18.32 %			
ANNUAL AVERAGE GROWTH RATE	3.13	02/2002/03		22002002020
LANGUAGE:	Sindhi,	Urdu,	Dhatki,	Balochi,
	Saraiki.	Guirati, F	Parkari & T	hari.

1.5. Administrative System

Administration System

Mitthi is the district headquarters of Tharparkar District, with four Tehsils in its revenue set up. Those Tehsils are as under:

- 1. Mithi
- 2. Diplo
- 3. Chachro
- Nagarparkar

Under the devolution system, the District Government of District Tharparkar is administratively managed by 4-Tehsils and 44-Union Councils in the district government setup. The administrative set up of the district government is composed of three tiers:

- Office of the Zila Nazim
- Office of the District Coordination Officer followed by 09 groups of offices namely Revenue, Education, Finance & Planning, Works & Services, Agriculture, Health, Education, Information Technology and Law.
- Zila Council.

Section No. 2

Disaster Risks in District Tharparkar

Disasters experienced by Tharparkar district can be divided into two broad categories such as natural disasters and man-made disasters. ⁴Historically, Tharparkar has encountered the following disaster:

S.#	Disaster	Years
1	Drought	1987-88, 1991-92, 1999-2000, 2002-2003, 2005
2	Flash Flood	1993, 2003-2004, 2006
3	Fire	Every year 100-200 fire case
4	Locust Attack	1979, 1993-94
5	War /Barder Tension	1971, 1998-99
6	Earthquake	1982, 2001, 2005, 2009

Droughts, heavy rainfall and floods are common natural disasters which occur in quick succession. As far as the man-made-disasters are concerned one of the living disaster faced by the coastal populace is the Left Bank Outfall Drain (LBOD) and its components which have proved to be a 'huge technical failure' and has badly affected the Barrage areas of the district.

2.1. Vulnerable Areas

Vulnerability is defined as the degree of losses to a given element at risk resulting from a given level of hazard. The vulnerabilities of communities need to be analyzed carefully and appropriate risk reduction measures be undertaken. Hazards of various types (common in the coastal belt) need to be analyzed and monitored, both in terms of their individual effects and also their possible cumulative effects if more than one impacts at the same time or if a particular hazard impacts over a long period of time.







The vulnerability analysis is, thus, a process that deals with the understanding of the types and levels of exposure of persons, property and the environment (against a

Source: Profile of District Tharparkar, TRDP Reports

hazard) at a particular time. However, the capacity and vulnerability analysis provides knowledge and understanding of communities, government and other agencies about hazards and community capacities to respond.

There are two major dimensions of vulnerability in Tharparkar district - structural and non-structural.

The structure and placement of the houses and non disaster-resistant physical infrastructure and remoteness combine to constitute the physical vulnerability of the communities generally. The most vulnerable areas in Tharparkar district are Siran Colony, islamkot town, Barrage Dehs, DiploTown, Phant, Serhi, Chachro Town Chelhar, NAgarparkar Town etc.

2.2. Hazards

Hazards are generally defined as any phenomenon, substance or situation, which has the potential to cause disruption or damage to infrastructure and services, people, their property and their environment are called to be hazard.

a.	High	Drought
b.	Medium	Heavy Rainfall
c.	Low	Earthquake , Social conflict

2.3. Disaster Trends

A chronology of disasters over the last five decades reveals that the district has remained in the grip of an uninterrupted cycle of disasters in one form or the other, e.g Droughts of 1987-88, 1991-92, 1999-2000, 2002-2003, 2005, floods of 1993, 2003-2004, 2006 and hundred of fire incidents every year.

A societal disaster for Tharparkar district caused by unplanned development is another major problem faced by district Tharparkar, It is linked with global warming; although global warming is slow onset disaster, yet it has been causing prominent negative impacts on the socio-economic life of society in the district.

2.4. Institutional Capacity

Until now disaster management was an adhoc activity undertaken only in case of emergencies while exercising the powers vested under Calamity Act 1956. The District administration of Tharparkar reviews its contingency planning annually before the onset of monsoon season. Under Contingency Plan the district administration establishes emergency cell (EC) in district headquarter i.e. in the office of DCO.

The insufficient capacity of district administration has led to the development of dynamic pressures making marginalized communities more vulnerable against disasters. Consequently, the rural population of district Tharparkar is still enmeshed in the vicious circle of poverty. Basically, the root causes of this imbroglio are as under:

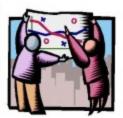
- Less institutional capacity of district government/administration to tackle the issues related to emergencies management.
- Lack of structure planning and implementations particularly community infrastructures in the most vulnerable areas.
- Less capacity and interest of district administration towards disaster risk management and relevant capacity building of various key actors.
- d. Lack of coordination and acceptance of inter and intra government agencies and NGOs working on Education, Health, Climate Risk Management, Environment, and Disaster Risk Management.
- e. Lack of social security and pro poor development initiatives.
- Inadequate early warning systems, communication protocols and preparedness measures.

However, one of the dynamic pressures faced by the district administration seems lack of coordination and systematic mechanism amongst the bordering district. The bordering districts itself are prone to different hazards of different nature. If such systematic coordination mechanism is developed each district may easily benefit from it in case of emergency through mobilization of human resources, material resources, technical resources, etc in this regard.

Section No. 3

Priority Strategies for Disaster Risk Management

The National Disaster Management Framework (NDMF) under National Disaster Management Ordinance, 2006 (NDMO) has set nine priority areas to promote disaster risk management and develop capacities at all levels of government. The District Disaster Risk Management Plan (DDRMP) Tharparkar refers to the National Framework and has adopted a set of six vital components objective to support the National Government and to enhance its own



capacities in the district. The District Disaster Management Authority (DDMA) will prepare operational policies, tools and related activities for each of the component objectives as specified under. The priorities set out in this plan are initially for next two years period.

3.1. Institutional Arrangements

The National Disaster Management Ordinance 2006 provides for the establishment of Disaster Management Authorities at national/provincial and district level to develop and implement effective disaster risk management strategies. In district Tharparkar series of individual meetings have been had with district authorities and government functionaries to highlight the importance of NDMO 2006 and community benefits of implementation of DDRMP in district Tharparkar.

The response of district administration/government during previous disasters was satisfactory according to their capacity that was void of humanitarian approach practically. Usually district administration prepares contingency planning annually for coping with floods and cyclones. In emergencies the district administration exercises Calamity Act 1952 to provide food support at subsidy rates. In case the disaster happens to be severe all necessary makeshift arrangements are made without keeping in mind the minimum standards specified in SPHERE.

In the light on NDMO 2006 the establishment of the District Disaster Management Authority is an immediate action which the District Government has to take on priority basis in the first year. The constitution of DDMA with clear delineation of roles, functions and tasks before, during and after disasters provides operation space to devise departmental strategies to be consolidated for effective implementation of disaster risk management strategies in the district.

The roles and key functions of local government from talukas, union councils, village councils and citizen community boards will also have to be further clarified. The District Nazim, District Coordination Officer and the Planning and Finance Department will take the lead role in this priority area. For the development of all

necessary operational systems and procedures consultations will be held with relevant agencies, organizations, local government and communities to inform them about plan to ensure its ownership. This consultation will also focus on acquiring staff/identifying key personnel in charge of DRM as well as support staff.

3.1.1. Establishment of District Emergency Operations Centre



The District Emergency Operation Centre will be established at public secretariat with the consent of District Nazim and District Coordination Officer. The District Nazim will authorize District Coordination Officer to prepare PC - 15 to be submitted to the Chief Secretary Sindh/National Disaster Management Authority (NDMA) through Provincial Disaster Management Authority (PDMA) for approval and execution.

The DCO will be the chairman of DEOC while separated experienced staff will be taken on board. Initially this centre will recruit staff for the period of two years which will be extendable based on performance. The district government will allocate separate budget allocation for DEOC; which will be autonomous body having coordination with rest of the line departments particularly revenue, buildings and irrigation. However, the District Office Bait-ul-Mal and Ushar & Zakat will be focal points for local assistance as both of them have ceiling specific for development⁶ of marginalized segments.

Five member committee comprising of XEN Irrigation/LBOD, EDO Revenue, EDO Health, EDO Education and EDO Communication and Works Department will be constituted to provide technical input while the DCO/District Nazim will be the lead person.

The DEOC will function permanently as the district is most vulnerable against disasters; existence of such centre is very important in this district. Instead of taking staff on deputation for this centre it is strongly advisable that the staff consisting on five persons may be hired/appointed and required furniture & fixture along with necessary mobility will be provided in addition to access to digital means of communication and dissemination. The major functions of DEOC are as under:

- The DEOC will function as a part of district administration
- During emergency, it will be activated and manned to function round the clock.

⁵Planning Commission Format -1

⁶Individual Financial Assistance (IFA) General, Medical & Education with PBM and Rozgar Scheme with Ushar & Zakat Department

- The DEOC will coordinate with all the departments working in the district ensuring that the disaster risk management approach has been incorporated in all the development schemes prepared by respective departments.
- 4. Development and implementation of Community education and Preparedness Programmes to overcome any disaster given wide publicity through posters, banners, handbills in the district mostly in vulnerable areas.
- The DEOC will prepare flood control programme/update contingency plan every year before onset of monsoon through consultation with the members of the District Disaster Management Authority.
- 6. The warnings will be circulated to all the concerned departments, TMAs, Union Council Administrations officially and the most vulnerable villages through involvement of NGOs working in that area.
- Design training modules; arrange simulations and mock exercises for representatives from line departments, taluka/union council Nazims, NGOs, and CCBs.
- Maintain and manage emergency stockpiling at district level and update virtual stockpiling list for quick supplies in case of emergency.
- Review the operational strategies of key departments and provide technical support and input where it is necessary.
- Monitor the situation frequently and keep the record of changes taking place in addition to preparing situational specific copping strategies.

Outcomes with Timeframe and Responsibility

1. Activity:	The District Disaster Management Authority constituted and the embers appointed
2. Activity:	The DDMA tasks, functions, roles and responsibilities clarified and disseminated
3. Activity:	Roles and responsibilities of Taluka and Union Councils in Disaster Risk Management developed
4. Activity:	Setting up fulltime functional District Emergency Operation Centre (DEOC) to monitor and supervise the implementation of different coordination activities among departments and develop partnership strategy amongst external organizations such as INGOs, NGOs for disaster management programmes/projects in the district.
5. Activity:	The District Disaster Risk Management Plan updated and approved by the district authorities.

- Support Agency: Provincial Government, CDD, EDOs, Finance & Planning Department, Revenue Department, Taluka and Union Council Nazims, and NGOs
- Lead Agency: PDMA, DCO, District Nazim, CDD, Civil Defence, NGOs, Technical Agencies, and Media
- Timeframe: Two months of first year

3.2. Risk Assessment

Hazard and Vulnerability Assessment is a very important phase of disaster management planning in addition to risk assessment through participatory approach. This kind of assessment answers the fundamental question that fuels the natural hazard mitigation planning process. The data collection is the very important part of assessment that requires good quality of team having strong sense of situational analysis and observation. There is no systematic and proper database available at district level yet plenty of information is available with different NGOs working on DRM.

The Revenue Department, Community Development Department and District Emergency Operation Centre will be the lead agencies to perform this task and developing database. They are responsible to develop appropriate assessment methodology, identify the sources required and ensure the quality and standard of baseline data, meanwhile, the NGOs and other relevant agencies will be involved in the whole process.

The District Disaster Management Authority through Revenue Department, Community Development Department and Emergency Coordination Centre, local NGOs and Technical Experts will conduct the hazard vulnerability and capacity assessment of entire district through utilization of PPA and PRA Tools under participatory approach. The Revenue Department and Emergency Coordination Centre are directly responsible for preparation of hazard specific digital map with the support of SUPARCO highlighting the dangerous zones categorically.

In this entire process the TMAs and Union Council Nazims and Councillors will be involved. The vulnerability and capacity assessment will identify key infrastructures and environmental resources in addition to various social groups in each local area which is prone to devastation caused by hazards. Pakistan Metrological Department, WAPDA, Telecommunication and NGOs working on DRM will provide all necessary support during conduction.

Outcomes with Timeframe and Responsibility

- Activity: Development of HVCA manual and formats for each department for implementation at various programme levels
- Activity: Conduction of HVCA of entire vulnerable areas and communities of district Tharparkar
- Activity: Development and maintenance of data base of Hazards, vulnerabilities and Capacities of district Tharparkar

Support Agency: CDD, HRDO, Finance & Planning Department, Civil Defence, Revenue Department, Taluka and Union Council Nazims, NGOs, and DEOC

Lead Agency: DCO, EDOs, TMAs, NGOs, Technical Agencies, Media, IT Department, Agriculture Department, Irrigation/Drain, Health Department and Education Department

Timeframe: Four months of first year

3.3. Training, Education and Awareness

One of the major gaps found in the modus operandi of district departments and concerned authorities depicts lack of knowledge of disaster management practices and approaches. The government departments are seldom provided training opportunities except deliberations on contingency plan. The district departments usually receive very specific departmental trainings. Enhancing the knowledge and



skills of decision makers and at risk communities is also essential in order to promote a culture of resilience. The main purpose of training, education and awareness raising activities will be to develop a cadre of experts who will be able to analyse risks and develop and implement disaster risk management programmes in district. The DRM training, education and awareness raising is essentially required in multiple

sectors such as civil servants, technical staff, NGOs, media, elected representatives and communities.

It is vital for them to develop an understanding about disaster preparedness, response and overall disaster risk management. In addition to these specialized trainings will be organized such as search & rescue, site planning & camp management, evacuation mechanism, first aid & fire fighting, beneficiaries' identification & relief distribution, disaster preparedness and risk management. The Human Resources Development Department (HRDD) under the Office of the District Coordination Officer, District Emergency Operation Centre (DEOC) and Community Development Department (CDD) will be the lead agencies.

These agencies will assess the levels of awareness, training and skills needed among government personal and design, implement and evaluate awareness campaigns, skills training and simulations. Training Needs Assessment (TNA) will be conducted to ensure appropriate training is imparted to all. These HRDD and DEOC will liaise and work with other technical agencies, NGOs and UN to support training of personal.

Outcomes with Timeframe and Responsibility

- Activity: Development of curriculum on disaster (risk) management and arrangement of trainings accordingly for district administration/government
- Activity: Development of curriculum for media orientation on disaster (risk)
 management, preparedness, minimum standards and different
 humanitarian approaches and strategies
- Activity: Enhancement of technical/logistical skills and knowledge of TMAs in hazard prone parts of district Tharparkar enabling to respond disasters timely and humanely.
- Support Agency: CDD, HRDO, Finance & Planning Department, Civil Defence, Revenue Department, Taluka and Union Council Nazims, NGOs, and DEOC
- Lead Agency: DCO, EDOs, TMAs, NGOs, Technical Agencies, Media, IT

Department and Education Department

Timeframe: Six months of first year

3.4. Community Based Disaster Risk Management

The disasters induce poverty, making better-off people poorer and the poor destitute despite programmes aimed at fighting poverty. Hazards create direct damages, indirect effects, and secondary hazards to the community. Community Based Disaster Management is participatory measures taken by community being a primary actor during different phases of emergency. Disaster risk management entails measures to curb disaster losses by addressing hazards and people's vulnerability.

Community Based Disaster Risk Management Programme is good and practical model at community level which has been practised by some NGOs in Tharparkar district. The DDMA will work together with local communities to help increase understanding and resilience before, during and after disasters. It is quite important to develop the ability of district authorities, NGOs, union councils, village councils and communities to act efficiently when an extreme natural event takes place so that it may not develop into a full-scale disaster.

The ability of a community to protect itself against natural events/hazards is decisive. The taluka, union councils and village authorities will design localised disaster risk management plans for their respective areas. Each plan will contain analysis of area, potential hazards, vulnerabilities, copping mechanism, available and required resources, strategies for disaster risk management and roles & responsibilities of each stakeholder.

Outcomes with Timeframe and Responsibility

- Activity: Established and strengthened local institutions for DRR at taluka, union councils and village council level
- Activity: Development of DRMP at taluka, union council, village council and household level
- Activity: Enhanced the capacity of various actors at taluka, union council and village council level making them able to deal with DRR&P
- Activity: Raised the awareness of vulnerable communities, local stakeholders regarding hazards, risks reduction, vulnerabilities and preparedness
- Activity: Implemented flood resilient infrastructure and small structural mitigation schemes in the most vulnerable areas
- 6. Activity: Strengthened livelihood of vulnerable groups
- Support Agency: CDD, HRDO, Finance & Planning Department, Civil Defence, Revenue Department, Taluka and Union Council Nazims,

NGOs, and DEOC

Lead Agency: DCO, EDOs, TMAs, NGOs, Technical Agencies, Media, IT

Department and Education Department

Timeframe: Six months of 2nd part of second year

3.5. Multi Hazards Early Warning System

Dissemination of messages relating to relevant hazards, which may include advice on protective measures. Disaster prevention and mitigation are essential to sustainable

development and early warning systems are the key to effective risk reduction. The district based early warning system with a network of sub stations at least at taluka level is very important for Disaster Risk Management. To be effective, early warning systems must be people-centred. A complete and effective early warning system comprises four interrelated elements: risk knowledge, monitoring and warning service, dissemination, communication, and response capability. A weakness or failure in any one of the part could result in failure of the whole system.



The main objective of the people-centred early warning systems will be to empower individuals and communities threatened by hazards to act in sufficient time and in an appropriate manner so as to reduce the possibility of personal injury, loss of life, damage to property and the environment, and loss of livelihoods. The communities, particularly the most vulnerable ones, are central to people-centred early warning systems. Their input to system design and their ability to respond ultimately determines the extent of risk associated with natural hazards. They should be aware

of the hazards and the related effects to which they are exposed and be able to take specific actions to minimize the threat of loss or damage.

Early warning will help to reduce economic losses by allowing people to better protect their assets and livelihoods. For example, they can safeguard homes, sell livestock or select appropriate crops for a drought season, thus limiting not only the immediate impact of a disaster but also the knock-on effects on assets that can affect the economic well being and increase poverty.

Early warning information allows people to make decisions that contribute to their own economic self sufficiency and their countries' sustainable development. If well integrated into a systematic framework of disaster risk management, early warning systems can provide many development benefits. Early warning systems also promote the development and the application of scientific knowledge, including improved science and technology information dissemination. They contribute to the creation of data archives and information bases that are essential to longer term economic development planning and decision making.

Early warning systems enhance communities' capacities through participation processes, public-private partnerships, and recognition of indigenous knowledge and values. Developing and implementing an effective early warning system requires the contribution and coordination of a wide range of individuals and institutions such as district line agencies and NGOs. Each has a particular function for which it should be responsible and accountable.

This is the primary responsibility of the district government to be actively involved in the design and maintenance of early warning systems, and understand advisory information received to be able to advice, instruct or engage the local population in a manner that increases their safety and reduces the possible loss of resources on which the community depends. NGO(s) will play a critical role in raising awareness among individuals and organizations involved in early warning and in the implementation of early warning systems, particularly at the community level. In addition, they play an important advocacy role to help ensure that early warning stays on the agenda of government policy makers. The public sector technical and institutes will provide all necessary input to the functionality of Early Warning System. Meanwhile, the private sector has a diverse role to play in the early warning, including developing early warning capabilities within their own organizations. Media plays an important role in improving the disaster consciousness for the general population and disseminating early warnings.

In addition, the private sector has a large untapped potential to help provide skilled services in the form of technical manpower, know-how or donations (in-kind and cash) of goods or services, especially for the communication, dissemination and response elements of early warning.

Outcomes with Timeframe and Responsibility

- Activity: Developed Early Warning System (EWS) at District Tharparkar level in addition to sub stations situated at each taluka
- Activity: People centred community based Early Warning System established in the most disaster prone areas of district Tharparkar.
- Activity: Enhanced the awareness of media about scientific aspects of EWS, the role of media in communicating EW in addition to building capacity on how to report disasters.
- Support Agency: DCO, District Nazim, NGOs, Technical Agencies, Nazims
- Lead Agency: HRDO, TMAs, Met Office, Revenue Department, Finance & Planning Department
- Timeframe: Six months of 1st part of second year

Section No. 4

Structure for Disaster Risk Management and Key Stakeholders

The structure of disaster risk management at district level will be as follows:

4.1. District Disaster Management Authority

As per the National Disaster Management Ordinance of 2006, the District Disaster Management will be established by the provincial government in hazard prone areas on a priority basis. The District Authority is comprised of District Nazim, District Coordination Officer (DCO), Police Officer and EDO



Health. The local government can nominate other officers as members of the DDMA. They may include EDOs for education and agriculture, Red Crescent, NGOs, Media, Private Sector, Fire Services, or any other local stakeholders.

4.1.1. Key functions of DDMA as specified in NDMO 2006

- Formulate district/municipal disaster risk management and preparedness plans, based upon hazard and vulnerability analysis of the district/municipality;
- ⇒ Coordinate and monitor implementation of district/municipal plan in accordance within the National Framework and Provincial plan;
- Continuously monitor hazards, risks, and disaster threats and the conditions of vulnerable population within the district or municipality;
- Prepare guidelines for risk reduction, preparedness and response;
- Identify training needs and conduct education, training and public awareness programs;
- Conduct training in disaster risk management and relief administration for local government officials, public and civil society representatives, and at-risk communities.
- Set up, maintain, review and upgrade district level early warning and communication systems for effective dissemination of warning messages;
- Coordinate with local authorities to ensure that post disaster activities are carried out promptly and effectively;
- Review development plans of government departments at the district/municipal level and provide guidance on mainstreaming disaster risk management measures in these plans.
- ⇒ Encourage the involvement of community groups in disaster risk management and response by providing them necessary financial and technical assistance for implementing community level initiatives;
- Identify buildings and places in the district/municipality that could be used as evacuation sites or relief centres in case of a disaster, and make arrangements for water supply and sanitation in such buildings or places;

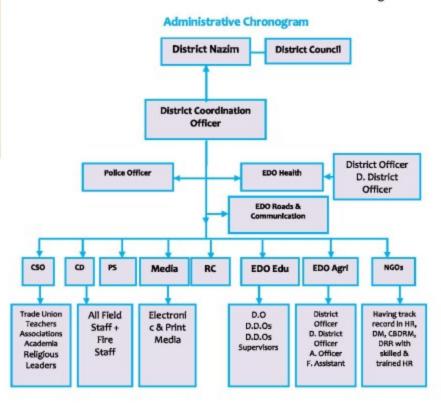
- ⇒ Establish stockpiles of relief and rescue materials or ensure preparedness to make such materials available at a short notice;
- Identify alternative means for emergency communications, should the regular communications be disrupted;
- In the event of a disaster/ emergency, the DDMA / MDMA in the affected District/Municipality will take operational control of the situation to ensure that support is delivered promptly to the affected communities.
- Keep linkages with the Provincial Disaster Management Authority and the Relief Department.
- Mobilize and coordinate all interventions from other agencies at the time of emergencies.
- Mobilize needed financial and material resources for disaster risk management.
- Perform such other functions as the Provincial government of Provincial Authority may assign to it or as it seems necessary for disaster management in the district;
- Invest in specific capabilities according to the requirement to manage all types of threat peculiar to local area

4.1.2. Taluka Structures and Responsibilities

Institutions at this level are the frontline of disaster risk management and response, where disaster activities are actually implemented. These include Taluka Municipal Administration and town authorities. Taluka and town Nazims will lead in all risk reduction and response operations with the help of Taluka or Town Municipal Officer in consultation with the DDMA. Key players include; extension workers, police, local fire services, community organizations (COs), traditional leaders and NGO's.

Institutions will establish appropriate structures both for disaster risk management, preparedness and civil protection systems. Particularly the authorities at this level will work closely with the communities and community groups to enhance resilience by developing local capacities, implementing programmes, and providing support. Taluka Council is to approve land use, zoning and master plan of the taluka development and maintenance programmes or projects proposed by the Taluka Municipal Administration.

The Town Council has also gotten similar powers and responsibilities to be executed under the SLGO. The institutions at this level are the frontline of disaster risk management and response. For many departments this is the lowest level of administration where they interface directly with communities; agriculture, education, health, police, revenue and others. Extension workers of above departments could play a significant role in promoting risk reduction.



For example agriculture extension workers could promote awareness of drought, flood or cyclone resistant crops. Health workers will raise people's awareness about potential diseases that may occur after flood or drought and how to prepare for them. Education officials could work on school disaster preparedness.

Similarly Taluka Authorities have an important role in organizing emergency response and relief; e.g. damage and loss assessment, recovery needs assessment, Taluka and Town Nazims will lead in risk reduction and response operations with the help of Taluka or Town Municipal Officer in consultation with DDMA. Other key players include: extension workers, police, fire services, community organizations (COs), traditional leaders, and NGOs.

4.1.3. Union Council

A Union shall be an area comprising one or more dehs or, in the case of an area where revision of settlement under the law has not been taken, one or more census

villages or, in the case of an area with urban characteristics, a whole number of population census blocks as delimited for the purpose of last preceding census or a combination of whole number of census blocks and a whole number of dehs, notified as such by the Government: provided that, as far as may be:

- The area of a Union shall be a territorial unity;
- The boundaries of a Union shall not cross the limits of a Taluka, or a town in a city district;
- The area of a union in a Taluka shall comprise a whole number of tapedari circles, or a tapedari circle may contain a number of whole Unions;
- The area of a Union in a City District, or a Union with urban characteristics shall comprise a whole number of census blocks as delimited for the purpose of the preceding population census or a whole number of dehs or a combination of a whole number of census blocks and dehs; and
- · The population of Unions within a district shall, more or less, be uniform:

4.2. Responsibilities and Duties of Key Stakeholders

4.2.1. General Responsibilities

Departments/Agencies	Responsibilities/Tasks
Department of Agriculture, Forestry, livestock and Department of Revenue	Develop and maintain appropriate policy and Strategies regarding land use. Develop and maintain policy and advice on animal and crop related issues such as food security, agriculture technology, agro-climatology, irrigation, food preservation, and forestry that reduce community vulnerability
Department of Planning and Finance, District Council and Taluka Municipal Administrations	Develop and maintain appropriate policy and strategy regarding environmental protection and disaster risk reduction and development
Department of Revenue, Community Development Department and Taluka Municipal Administrations	Ensure all nationally and internationally funded development projects address risk reduction.
District Government and Administration	Develop and maintain disaster risk management legislation
Department of Public Health and Taluka Municipal Administrations	Develop and maintain a public health management plans and strategies
Department of Community Development, Civil Defence	Develop and maintain preparedness including planning and the necessary training for

	emergency responders. Develop and deliver disaster related public education and awareness programs
All the departments/agencies	Develop and maintain response plans for situations that will impact on the ability of the department/agency to continue operations
All the departments/agencies	Develop and maintain disaster operational response support plans, including resources lists, to support the District Disaster Risk Management Plan (DDRMP)
Pakistan Metrological Department and DDMA Tharparkar	Develop and maintain appropriate early warning, monitoring and coordination systems
District Disaster Management Authority	Develop and maintain disaster related multi sector training programs
All the departments/agencies	Participate in disaster relief, rehabilitation and recovery programs

4.2.2. Specific Responsibilities

4.2.2.1. Revenue Department

Pre-disaster responsibilities

- To ensure establishment of control rooms at each Mukhtiarkar Office this will function round the clock under the supervision of DEOC and Revenue Department.
- To prepare contingency plan for evacuation of people in consultation with DEOC, NGOs and Union Council Administration.
- To take immediate steps for the arrangements of Relief Fund/Humanitarian Support from DDMA/PDMA in case of emergency.

During disaster responsibilities

- To establish relief camps in coordination with Executive District Officer Education, DEOC, and NGOs where necessary in emergency.
- To make arrangements for the availability of sufficient number of family tents for emergency.
- To form quick response teams comprising of representatives of all concerned departments, DEOC and NGOs.
- To arrange possible transportation means and manpower (police force) to be engaged in emergency response.
- To make prior arrangements of food supply as per minimum standards in coordination with food department, DEOC, CDD and NGOs.

 To make arrangements in coordination with District Police Officer for sufficient transport for the evacuation and relocation of affected communities.

Post disaster responsibilities

- To mobilize villagers in emergency response with the support of DEOC and NGOs during monsoon.
- To take immediate steps for the arrangements of Relief Fund/Humanitarian Support from DDMA/PDMA in case of emergency.

4.2.2.2. Irrigation/Drain

Pre-disaster responsibilities

- To liaise with DEOC and all the concerned
- To prepare departmental contingency plan and circulate its copies to all the concerned stakeholders before monsoon onset.
- To identify the most vulnerable points of LBOD and Irrigation Canals.
- To remain in touch with DEOC, NGOs and PMD district Office and share the information/updates about emergency with all the stakeholders.
- To make all necessary infrastructural arrangements in case breaches take place suddenly.
- To establish special flood warning centers at union council level with the support of DEOC and NGOs.
- To make arrangements of sand-bags, machinery, human resource and other material to be used at the time of need.
- To maintain the embankments of river and canals of the District during the rainy season.
- To take necessary measures to reinforce the bunds with stone pitching, wooden slabs and sand sacks.
- To operate the drainage system efficiently with special attention to the drainage regulators, which are discharging drain water in to the sea, round the clock, vigilance be made over the regulators.

During disaster responsibilities

- To ensure functionalization of Flood Control Cell (FCC) in proper order.
- To make special arrangements for watch and patrolling of vulnerable points of LBOD and Irrigation Canals.
- To ensure that LBOD and other drains are working properly and the drains are disposing off rain/flood water is continuously and orderly.

Post disaster responsibilities

To liaise with DEOC and all the concerned.

- To remain in touch with DEOC, NGOs and PMD district Office and share the information/updates about emergency with all the stakeholders.
- To assist and coordinate repair work and maintain damaged infrastructures with the support of SIDA, Revenue and DEOC.
- To take necessary measures to reinforce the bunds with stone pitching, wooden slabs and sand sacks.

4.2.2.3. Education Department

Pre-disaster responsibilities

- To deploy sufficient staff on duty at all relief camps.
- To train and organize relief teams to support the DDMA relief distraction teams.

During disaster responsibilities

- To assist the DDO Revenue, TMA for properly establishing the relief camps in schools and provision of relief in case of emergency.
- To ensure that all basic facilities are made at each camp with the support of DEOC, NGOs, CDD, TMA and XEN Public Health and monitor the duties of staff.

Post disaster responsibilities

- To take all necessary measures for functionalization of schools.
- To provide human resource for assistance in survey of damages and needs.

4.2.2.4. HESCO/WAPDA

Pre-disaster responsibilities

 To form special committee headed by Line Superintendent for inspection of electricity supply lines in the most prone areas.

During disaster responsibilities

- To ensure that no case of electrocution may occur.
- To make sure that in case of breaking of live electric wires immediate steps are taken.
- To ensure supply of electricity at various points as per demand of agencies working at the time of emergency.

Post disaster responsibilities

 To make proper and immediate arrangements for maintenance of electricity supply.

4.2.2.5. Health Department

Pre-disaster responsibilities

- To ensure availability of Doctors, Paramedical staff and required necessary medicines in all the hospitals, Basic Health Units and Rural Health Centers in emergency.
- To make sure availability of all vaccines especially dog bite, anti snake vaccines in emergency.
- To ensure establishment of high alertness system at union councils which are the most vulnerable

During disaster responsibilities

- To depute fully equipped medical teams at all the relief camps in case of emergency.
- To make necessary arrangements for the prevention of epidemics/ASA.
- To make necessary arrangements for mobile medical teams with sufficient medicines during emergency.

Post disaster responsibilities

 Provide and disseminate on massive scale the information regarding precautions of epidemics.

4.2.2.6. Agriculture Department

Pre-disaster responsibilities

- To depute District Officer Animal Husbandry (Livestock) and concerned staff to save the livestock from flood induced diseases and losses during heavy rain.
- To make vaccination/de-worming arrangement against outbreak of contagious diseases to the livestock of affected areas.

During disaster responsibilities

- Ascertaining quantum of damage done by disaster to crops, livestock and the fertility of land.
- Provide necessary treatment to the ailing animals.

Post disaster responsibilities

- To make necessary and relevant arrangements for rehabilitation from mechanical wing in emergency.
- To establish Veterinary Relief Camps for Live Stock at accessible focal points.
- Providing necessary technical assistance to avoid fungus and other disaster related crop diseases.

 To arrange capacity building training opportunities of Agriculture department regarding DRM.

4.2.2.7. Food Department

Pre-disaster responsibilities

- To make arrangements of food supply from different parts of Sindh province in emergency.
- To maintain proper record of virtual food stocking and keep it updated.
- To make arrangements for shifting food stocks from vulnerable zones to safer areas.

During disaster responsibilities

 To arrange sufficient Packets of cooked food for the affected people living in the relief camps at the time emergency.

Post disaster responsibilities

To establish food supply centres at feasible locations as required.

4.2.2.8. Communication and Works

Pre-disaster responsibilities

To keep ready public/private crane lifters.

During disaster responsibilities

- To make sure the availability of staff and arrange machinery for removal of debris and keep all roads motor-able for evacuation and relief.
- To ensure water supply, electricity and drainage at all relief camps in coordination with Executive District Officer Revenue, Education, XEN Public Health, DEOC and NGOs in emergency.
- To ensure maintenance of roads and improvise bridges after cyclones/flood for making accessibility of humanitarian response more possible to affected areas.

Post disaster responsibilities

 To coordinate with DEOC for conduction of surveys, loss & damage assessment, extent of damage of community infrastructures.

4.2.2.9. Community Development Department

Pre-disaster responsibilities

 To ensure availability of maximum number of trained volunteers to assist in humanitarian response.

During disaster responsibilities

- To mobilize all the NGOs, CCBs and Business Community in humanitarian response.
- To help DEOC maintaining record of the losses and developing coordination mechanism with INGOs, NGOs and UN Agencies for timely response.

Post disaster responsibilities

- To mobilize all the NGOs, CCBs and Business Community in humanitarian response.
- To prepare rehabilitation programmes together with DEOC

4.2.2.10. Police Department

Pre-disaster responsibilities

 To provide help to the irrigation, LBOD and revenue staff to avoid closure of modules by landlords/agriculturists in case of flood in canals/water courses.

During disaster responsibilities

- To assist in evacuation and relocation of people from flooded areas by providing logistical support.
- To maintain law and order situation in the affected areas particularly at relief camps.
- To provide necessary transportation security to relief material and its distribution if coming from far flung areas.

Post disaster responsibilities

 Provide Security to the Officer/Officials of Irrigation Department working at protective Bunds and Rescue Workers and assist the Rapid Relief force as and when required.

Meanwhile, it will be the prime responsibility of the District Police Officer (DPO) to make all out efforts through mobilization of force to provide relief to the general public in consultation with DEOC and NGO(s). In case of any emergent situation the Town/Taluka Police Officers (TPO) of the concerned locality will deploy their Police force at the vulnerable points of drains/canals to avoid any breach therein during rainy season or Cyclonic situation.

They will also keep close liaison with the officials of Departments concerned for the deployment of appropriate personnel. TPOs and the Senior Police Officers will also keep close liaison with the Union Council Nazims, Councillors and notables of the locality to keep awareness among general public about the situation which may occur due to eventual heavy rains/flood/cyclone. In case any information to this effect is received from the Metrological

Department/Officials, efforts will immediately be made to evacuate the people, in consultation with revenue department, DEOC and NGOs; residing along coastal areas to avoid any damage.

All TPOs/Senior Police Officers are further required to ensure that hosepipes are arranged and installed in all police vehicles so that same can move in flood/heavy rain water in case of any emergent situation. The following equipments should necessary be kept in all police vehicles/mobiles:

- i. Vehicles toe chain
- ii. Emergency Lights
- iii. Hoes and spades and exes

However, all the TPOs will be responsible to prepare list of 4X4 vehicles running within the jurisdiction of police stations and owners of these vehicles will be convinced by the responsible authority in dignified manner to provide the same to the District Administration voluntarily for evacuation and relocation of the affected people.

District Police Control Room is already functioning in Police Headquarters Tharparkar with telephone No. 0297 861244. Any information relating to Cyclone/Torrential Rains will be communication to DEOC through District Police Control Room. The staff details at Control Room will keep liaison with the officials of Metrological Department and get advance information from them. In case any information relating to the breach in Drains/Canals, is received the same will be communicated well in time to DEOC, the DCO/DPO and Army Cantonment Tharparkar.

4.2.2.11. Army

Pre-disaster responsibilities

 To provide rescue and search trainings during simulations/mock exercises.



During disaster responsibilities

- Rescuing the people from affected areas through boats⁷, heavy vehicles and helicopters.
- To assist in relief work particularly Food and Drinking Water supply to the affected people.
- To provide medical assistance where the EDO (Health) and his organization fails to have access.
- Maintain communication network and accessibility.

⁷HQ 18 Division Hyderabad has 71 boats

 To assist Irrigation department/LBOD division to protect and supervise the vulnerable points as mentioned in the Contingency Plan.

Post disaster responsibilities

 To provide technical assistance for construction of flood resistant community infrastructures.

However, in the past disasters the Pak Army have played remarkable role during the Cyclones 1999, 2001 and Flood 2003 in District Tharparkar. The Civil Administration has always been assisted by the Armed Forces during the Natural Calamities or Social Unrest in District Tharparkar. Under the circumstances the District Coordination Officer may declare emergency and request the Pak Army (Garrison) for the assistance of the Civil Administration to perform the tasks.

4.2.3. Other Organizations

4.2.3.1. Community Based Organizations

In order to promote community level disaster risk management and preparedness activities in the hazard prone areas, the capacity of existing community organizations will be developed and enhanced by the district, and taluka authorities. In case of absence of any community level organizations, the establishment of new groups will be encouraged by the local authorities to work on disaster risk management and preparedness.

The community organizations will be trained to develop local early warning systems,



and capacities in the areas of evacuation, first aid, search and rescue, fire fighting. Linkages will be developed between CBOs and relevant local agencies e.g. agriculture, bank, health and veterinary services to promote disaster preparedness in the aspects of community life. The skills and knowledge of CBOs leadership will also be developed in the areas of organizational management and development; e.g. financial

management, people management, resource mobilization, interpersonal communication skills and presentation and negotiation skills.

4.2.3.2. Non-Government Organizations

The Non-Government Organizations (NGOs) and voluntary agencies (VA) play an important role in disaster management and provide a strong band of committed volunteers with experience in managing the disasters. Their strength lies in the choice of their manpower, the informality in operations and flexibility in procedures. These organizations enjoy a fair degree of autonomy and hence can respond to changing needs immediately.

However, in order to maintain uniformity in operations and effective coordination, it is desirable that they follow the standards of services, information exchange and reporting so as to enable the DDMA to have a total picture of resources availability, disbursements and requirements. NGOs therefore will be assigned specific tasks by the DDMA to undertake relief work within the overall institutional framework. As and where possible, NGOs may also be able to improve the quality of service delivery. Specific activities in which NGOs/PS can be involved during disaster management operations are:

- Search and Rescue Operations
- Information dissemination
- 3. First Aid
- 4. Disposal of dead
- 5. Damage Assessment
- 6. Management of Information Centres at temporary shelters
- Mobilization and distribution of relief supplies including finances
- Manpower for community mobilization, crowd control, rumour control and traffic management
- Specialized services (psycho-social therapy)
- 10. Management of transit camps

4.2.3.3. Edhi Foundation

Edhi Foundation will be requested for rescue and search operation in addition to funeral arrangements of unclaimed dead bodies and provision of assistance to affected people in emergency.



4.2.3.4. Pakistan Red Crescent Society

Pakistan Red Crescent Society should provide its services to the people of Tharparkar as they are doing in other districts of Pakistan.



4.2.3.5. Academic and Research Institutions

Tharparkar district does not have such type of institutes which are engaged in detailed research studies; yet the district has unforgettable credibility for having good intelligentsia and intellectuals.

Hence, the responsibilities will be different. The academicians together with education department and NGOs are responsible to develop multi-hazards specific curricula to be approved by UNDP & NGOs and to be taught in schools and colleges. Whereas, the intellectuals and literary fora are responsible to develop DRR oriented folk literature with scientific touch focusing on DRR, preparedness, capacity building and resource building and mobilization.

4.2.3.6. Private sector (business groups, associations)

The private sector especially business groups can play important role in local fund raising in cash and kind through DEOC.

4.2.3.7. Media

The idea of serving the public lies deep in journalism's percept and practice. Journalism in all its forms makes the lives of people fuller, safer, richer, healthier and in many ways more rewarding. Disaster management is about life and death. A significant responsibility rests on the shoulders of the disaster manager. A similar responsibility rests with the media, which is one of the crucial communication links between the disaster manager and the general public, particularly during a disaster.

It is vitally important that the disaster manager and the reporter or editor work as partners, that they talk the same language, understand the same jargon, and appreciate and respect each other's role. Disasters are a significant source of news; disasters capture the attention not only of urban populace, but of populations through province/country. Media will play the following key responsibilities:

- To provide an easily accessible source of background information on disasters for media practitioners
- To ensure consistent interpretation and reporting of basic disaster information by media practitioners
- To alleviate the pressure placed on disaster management officials during emergencies
- To demonstrate recognition of the important role of the media in disaster management and the commitment to increase cooperation and collaboration between media and disaster management professionals.

However, District Information Officer will be responsible to regulate news regarding disasters and make media more careful for the following things during in emergency.

Risk Amplification: Risk amplification occurs when media sensationalism causes hazard perception and public concern to be magnified far beyond levels proportional to the risks estimated in risk assessment sciences. Such agenda-setting can create political activism or disruption more costly than the original hazard.

Risk Attenuation: Sometimes the media acts, instead, to attenuate perception of a significant hazard and thereby blunt concern and political pressure to do something about it.

Social and Political Bias: Not only can media amplify or attenuate hazards perception and political action, it can bias the representation of an actual disaster, with negative impacts on the equity and efficiency of response to a disaster and public understanding of the hazard realized in it. Faulty response can thereby accelerate polarization tendencies in a society in the wake of a disaster.

4.3. Mid Term Action Plan

The District Disaster Risk Management Plan (DDRMP) is a basic document, which identifies priority areas and proposes a broad spectrum of structural and non-structural activities to be implemented over a longer period of time for disaster risk management and sustainable development.

However, it is equally important to have a medium-term plan in place enabling the district government to carry forward the long-term agenda of making the district resilient against disasters in an effective manner by undertaking some specific activities for the first two years after the activation of DDRMP district Tharparkar.

The estimated budget has been given against each activity, however, the district government, in consultation with concerned departments will go into the budgetary details for determining realistic costs. Apart from allocating funds in the annual budget, the district government may seek financial and technical assistance from national and international NGOs and donor agencies for the successful and timely execution of proposed activities. The 2-year Medium-Term Action Plan includes following activities:

Year - 1

Formation, Establishment and Orientation of District Disaster Management Authority (DDMA):

Being the first step to provide a solid foundation to disaster risk management at the district level, it is essential to have a properly established and functional DDMA as per the requirement set out in the National Disaster Management Ordinance (NDMO), 2006. Following the formation and establishment of DDMA, the orientation of concerned members / staff will be of immense importance to lead the Authority with professional competence. Specific activities include:

- → An official notification to be issued by the DCO about the establishment of DDMA.
- →In the light of NDMO and the National Disaster Risk Management Framework, the terms of reference (ToRs) will be developed in respect of roles, responsibilities, mandate and other functions of DDMA.
- →An official ceremony will be organized to launch the establishment of DDMA.

- →A 2-day orientation session on disaster risk management will be organized for the members / staff of DDMA.
- → Purchase of essential IT equipment and furnitures

Estimated Cost (Pak. Rs.): 200,000/-

Orientation Sessions with District Departments, Elected Members and other Stakeholders:

Three separate orientation sessions by NDMA / PDMA representatives about the structure, roles and mandate of DDMA will be organized to inform, sensitize and take on board the following stakeholders. Each session may span over 3 hours:

- →The Executive District Officers (EDOs) of all district departments and the heads of offices which have not been devolved under the Devolution of Power Plan but functioning at the district level.
- → Elected representatives of the District, Taluka and Union Councils.
- →Citizen Community Boards (CCBs) and district-based CBOs, NGOs, and media.

Estimated Cost (Pak.Rs.): 200,000/-

Establish District Emergency Operations Centre (DEOC) and Early Warning System:

As mentioned in the DDRMP, the DDMA will establish a District Emergency Operations Centre (DEOC) to coordinate preparedness and response activities. The DEOC will also have necessary equipment installed to establish Early Warning System for receiving, processing and disseminating information about any impending disaster.

Estimated Cost (Pak.Rs.): 1,000,000/-

Year - 2

4. Specialized Training Workshops:

After the establishment of DDMA and the DEOC; and the orientation of district departments, elected representatives and other stakeholders during the first year of the Action Plan, there will be a need to impart specialized trainings on following topics:

- →3-day training for the staff of DEOC on early warning processing and dissemination, emergency response coordination skills and techniques, and overall management of the DEOC.
- →3-day training of district departments and other stakeholders on Flood, Cyclone, Earthquake and Drought Mitigation.
- →2-day training of key district departments (Civil Defence, Revenue, Social Welfare & Community Development etc.) on developing district, taluka, union and village-level disaster risk management plans.
- →3-day training of key district departments and relevant local NGOs on conducting Risk, Vulnerability & Capacity Assessment (RVCA).

Estimated Cost (Pak.Rs.): 400,000/-

5. Establish District Disaster Response Teams (DDRTs):

For an effective disaster response, DDRTs comprising First Aid and Search & Rescue will be established and trained:

- → Identification of members for both the teams
- →5-day training on First Aid
- →5-day training on Search & Rescue

Estimated Cost (Pak.Rs.): 500,000/-

6. Undertake District Disaster Risk Assessment:

Though the DDRMP speaks about the RVCA but the DDMA will have to undertake a thorough assessment of existing hazards and associated risks, identification of risk-prone areas and types of vulnerabilities, and document the capacities / resources available with the district government, civil society organizations and local communities with regard to disaster risk management.

Estimated Cost (Pak.Rs.): 1,000,000/-

GRAND TOTAL: 3,300,000/- (Pak Rupees 3.3 Million Only)

Section No. 5

Standard Operating Procedures (SOPs)

5.1. District Disaster Risk Management Plan

The District Disaster Risk Management Plan (DDRMP) is meant to provide operational guidelines to all the stakeholders in the district. Although this legal document of district administration especially by those with roles and responsibilities outlined herein and local government setup operational in the district. Yet the plan facilitates multi stakeholders and provides explicit sketch of the district to provincial and national government, UN agencies, INGOs and NGOs in case of emergencies.

5.1.2. District Disaster Management Authority

District Disaster Management Authority (DDMA) is a supreme body at district level and is responsible for disaster risk management along with all components of DRM. Hence, the major components of DRM will be prioritized such as early warning systems, preparedness, humanitarian response and mitigation. Meanwhile, all the departments coordinated through DDMA will strictly adhere to the following policy rules:

- Clarity of DDRMP, its vision, mission and objectives along with orientation and assignment of responsibilities and duties to the concerned department by Chairman/District Nazim DDMA
- Professional and moral commitment to perform the tasks specified in DDRMP by all the line agencies in district Tharparkar
- Close coordination and collaboration by all the line agencies and district administration irrespective of departmental obligations
- Persuasion of communication protocols for timely reporting and dissemination making different stakeholders able to design timely and appropriate responses
- Ensure humanitarian accountability at all stags
- Monitoring the situation persistently to ensure all the management arrangements timely, appropriate and gender & culture sensitive

5.1.3. District Emergency Operations Centre (DEOC)

- To provide necessary guidelines and operational strategies as per standard procedures and DDRMP on the disastrous situation to district administration, line agencies and NGOs
- To coordinate with the different stakeholders, line agencies, local government, NGOs, UN Agencies and concerned departments
- To support evacuation of the communities and relocation measures taken by concerned department

- Supervision and Monitoring by DDMA and DEOC of disaster management and relief activities together with NGOs/UN Agencies
- Coordination by DEOC with different stakeholders and provision of technical support to line agencies and NGOs in conducting Damage and Needs Assessments
- Contact and coordinate by DEOC and DDMA with NGOs, INGOs and UN Agencies for timely support

5.2. Warning Mechanism



The receipt of early warning plays key role in disaster risk management and humanitarian response. Pakistan Metrological Department Tharparkar office and the technical agencies are responsible to provide warning information to district administration and DEOC. However, some of the departments such as irrigation & drainage, agriculture (extension & engineering) and NGOs will be contributory

factors in establishing updated early warning system.

The related information and warnings of a disasters occurrence will be passed on to Chairman/Secretary of DDMA who will direct DEOC and the concerned departments for immediate response as per situation. In addition to this DDMA will take the following actions in this regard:

- Arrangement of joint meeting of DDMA and district administration for the analysis of situation and proper decision making
- Delegation of special tasks to concerned authorities/departments as per situation
- Capacity assessment of district administration and requirement of resources as per situation

Warning Dissemination Mechanism

DDMA is responsible to ensure the proper execution of DDRMP and all public warnings which will be disseminated through the secretariat of DDMA. The warning will be communicated to the concerned authorities and general public through reliable and appropriate media channels for timely preparedness and response. However, DEOC will be responsible to share the warning and related information with NGOs, INGOs and UN agencies.

5.3. Public Information

District Information Officer will be the spokesperson during emergency phase and will be responsible to share warnings and related information with media and public. Hence, DEOC will ensure that the information shared with media and public is

appropriate and authentic so that the chances of panic and havoc creation may be minimized. All these media and public briefings will be arranged by DEOC.

5.4. Request for Assistance

It is generally assumed that the district administration is one of the key organizations for issuing warnings and alerts and mobilization of required resources in case of emergency. However, the District Disaster management Authority holds the responsibility for the arrangement and mobilization of relief funds. The taluka administration and union councils will make request to the district authorities for the possible involvement of any concerned department to meet the disaster situation.

The DEOC will arrange the coordination mechanism by inviting all concerned NGOs and institution to put their efforts by working together with DDMA for reducing the impacts of the disaster. In case of large scale emergency which is beyond the copping capacity of DDMA and abundant resources are required. The chairman/secretary of DDMA will submit an official request to Provincial Disaster Management Authority for immediate response. The DDMA will be responsible for providing detailed information on needs and logistic arrangements to assist PDMA to meet the requests as quickly and effectively as possible.

5.5. Revenue Department

- Conducting coordination meeting with all DDOs (Revenue) for situation analysis
 of the affected areas and population
- Development of coordination mechanism and communication protocols
- Arrangement and conduction of damage, losses and need assessments
- Ensure application of proper mechanism for evacuation and re-location of affected community to safer places
- Establishment of Relief Camps with necessary arrangements

5.6. Health Department

- Arrangement of coordination meeting with health units
- Mobilization the entire heath network functioning in the district for situation analysis and need assessment
- Arrangement of mobile teams for pre-medication of affected communities
- Provision of necessary medical facilities at relief camps
- Making coordination and communication with DEOC

5.7. Agriculture Department

Conduction of assessment of crops, livestock, fisheries, forest and soil losses

- Share major findings and recommendations with DEOC for immediate response
- Establishment of veterinary centres for necessary services (vaccination & deworming of livestock and animal feed)
- Development of action plans for reclamation and rehabilitation of degraded lands

5.8. Works and Services

- Coordination meeting with all SDOs for situational reporting about length of damage of community infrastructures and services
- Arrangement of immediate response for the maintenance of communication means facilitating effective response delivery to the affected people
- Development of coordination mechanism with DEOC
- Support DEOC and district administration for development of rehabilitation proposals for the development of affected people and areas

5.9. Police

- Dissemination of early warnings received by DEOC to vulnerable areas through police stations and posts
- Make logistical arrangements for evacuation and supply of relief work in with coordination of DEOC and revenue department
- Management of necessary security arrangements for relief camps and affected areas
- Coordination and communication with DEOC

5.10. Irrigation & Drain

- Development of coordination mechanism with PMD for ascertaining flood discharge
- Development of mechanism for regulation of water discharge into canals, distributaries and drains before onset of monsoon season
- Development of monitoring mechanism for inspection of embankments, weak parts of drains, IPs (inspection parts) and NIPs (non inspection parts of all irrigation channels
- Delegation of responsibilities for regular inspection and maintenance of irrigation channels and drains
- Coordination and communication with DEOC

5.11. Information Management

In disasters, how the press conveys information to the public can magnify or reduce psychosocial distress for the "at risk" population. There are certain key principles that are often applicable to both types of disaster. The media is an important factor in conveying the extent and severity of the damage caused by a disaster to the external world and more often than not, they are the first to reach the disaster affected areas.

Therefore, it becomes essential that the media are given a concise picture of the extent of the damage from the information collected by the assessment method. A summary of the data collected could be made available at the end of the assessment process that conveys all pertinent information. Frightening news, if repeated many times to a community can magnify fears, leading to widespread stress and anxiety. This can be manifested in many forms and can ultimately impair decision-making processes, causing people to take wrong mitigation measures to protect themselves.

People who are not physically affected by a catastrophe, but who live within range of potential, possibly long-term and largely unknown dangers may be frightened by both proximity to the danger and the lack of credible information. To a large extent, the degree of fear and insecurity due to the lack of credible information will determine people's attitudes and overall behaviour. Communication of emergency information should consider the following:

- Information should be controlled by a single public spokesperson who openly cooperates with the press
- The press should also convey information on risk management and safety measures to be adopted by the public
- The spokesperson should be truthful and straightforward with the press in order to maintain credibility and trust
- The spokesperson should be clear about what is not known, as misconceptions
 are likely to lead to inappropriate responses by the press, the public and other
 partners in an emergency response.

5.12. Simulation and drills

DDMA with the support of DEOC, NGOs and UN will organize simulation drills and mock exercises. DDMA will provide and arrange all the required human, material and financial resources. The main aim of these simulations drills will be as under:

- Development of rapid response force
- Prepare skilled human resource for rapid emergency response
- Assessment of available potentials and areas of improvement
- Making the emergency response more effective, timely and cost effective
- Provision of procedural guidelines for the involvement of affected communities in the emergency response

Section No. 6

Conclusion

Tharparkar district has been encountering number of challenges to achieve sustainable development in true sense. These challenges are not relevant with particular department, sector or institute; rather it germens to all. Having good opportunities of investment in different sectors no one is willing due to frequent occurrences of disasters which liquidates the investment.

The development of District Disaster Risk Management Plan is one of the great achievement of government of Pakistan. Before initiation of National Disaster Management Framework the relief activities were carried out under Calamity Act 1952 that was more centralized and was based on bilateral approach.

This plan address the vulnerability of various union councils, talukas and clusters of villages situated in the most vulnerable areas. The plan also provides a separate volume on Standard Operating Procedures, details the responsibilities and duties of different departments to be activated during an emergency. This plan has been prepared taking into account the existing infrastructure, available resources, previous type of disasters that have occurred and their possibility of recurrence in future. It is meant to serve as an action plan for the District Administration, as well as to the other governmental organizations, NGOs, UN agencies and others.

DDRMP provides operational space along with procedural guidelines for execution of emergency Reponses with the participation of people and different stake holders. This is not denying the fact that if it is a major calamity, or small scale disaster, people play an important role in preparing for the management of the emergency situations, and in re-building the disrupted services and infrastructure. Risk management is part and parcel of the life of millions of people living in poverty in Sindh province. Hence, Women are the first to provide nursing care to the family members in case of any emergency. The involvement of people in emergency response is one of the remarkable features of this plan.

This plan is guide tool which will be reviewed every year by all stakeholders' suggestion to make it more districts specified for minimizing the risks of the natural and man made disaster situation.

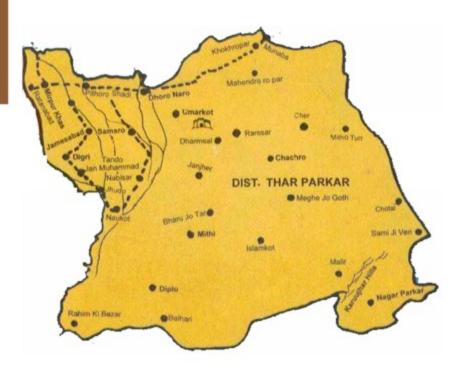
Section No. 7

Annexes

Part (1). District Information Annex 1 List of Important Telephone Numbers

S#	Name of Office	Telephone No							
26	Name of Office	Office	Residence	Fax No					
1	District Nazim	262225	26188	261308					
2	District Coordination Officer	261899 261667	261925	261818					
3	EDO Revenue Taharparkar	261444	261500						
4	EDO Health Tharparkar	261253							
5	Civil Hospital Mithi	261469		133					
6	District Police Officer	261519	261539	261534					
7	Taluka Nazim Mithi	261202							
8	Taluka Nazim Diplo	221220							
9	Taluka Nazim Chachro	273002		II .					
10	Taluka Nazim Nagarparkar	264009							
11	Mukhtiarkar Revenue Mithi	261202							
12	Mukhtiarkar Revenue Diplo	221220							
13	Mukhtiarkar Revenue Chachro	273002							
14	Mukhtiarkar Revenue Nagarparkar	264009							

Annex 2 Map of the District



Annex 3 Participants List District Tharparkar Disaster Risk Management Plan Consultation Workshop

Sr. No	Name	Designation & Department
1	Narainder Kumar	DDO, Roads
2	Nazir Channa	Sukkar Foundation
3	Mukesh Kumar	Sub Engineer Irrigation
4	Partab Khatwani	Supretendant Local Government
5	Satyadev Lalwani	DDO Tharparkar
6	Kirpal Das	Tax Supretendant TMA Mithi
7	Walidad Samoon	TMO, TMA Nagarparkar
8	Timathdas Lilani	TMA, Mithi
9	Shahnawaz Khaskheli	DSP Tharparkar
10	Youdhishter P Bada	DDO Planning
11	Sajjad Mohammad	D.O Water Mangement
12	Dongro Mal	SDO (HESCO)
13	Dr, Pirbhu Lal	DO Health
14	Natto Khan	DO Schools
15	M.Saleh Memon	D.O Education
16	Eng Hosh Latif	EDO CDD
17	Sarang Ram	DO Buildings
18	Dr. Mohabbat Khan	DO Livestock
19	Shamsudin	DO Finance
20	Haider Abbas	Eng. PTCL
21	Chulam ullah Jarwar	EDO Agriculture
22	Abdul Waheed Jamali	Coordinator Scope
23	Riaz Ali Memon	DDO EW/NC
24	Ashok Kumar	PHE Tharparkar
25	Dr, Zahid habib Bhutta	AD-NDMA
26	Malji Rathore	DDO Social Work
27	Lala Neel Amber	Manager DPM Unit TRDP
28	Dahesar Rathore	DO Agriculture
29	Mumtaz Ali Majeedano	DO Forest
30	Khalid Wattoo	EDO Revenue
31	Bharoomal Avari	PC Scope
32	Mohammad Yousaf Malik	TO (F) TMA Diplo
33	Abdul Hafeez Halepoto	DO Revenue
34	Ghulam Mustafa	Coordinator Maroora Coordination Council
35	Sajid Bajeer	Coordintor SPARC
36	Allahjurio Kuubhar	DCO Office Mithi
37	Shalim Kamran	Coordinator Planning NDMA/UNDP
38	Rizwan Tabassum	DRM Consultant

Annex 4 List of Network Organization Maroo-ara Coordination Council Tharparkar

Sø	Name of Organization	Working Sector	Area of Operation	Contact Person	Office Phone	
1	Bhittai Multi Purpose Cooperative Society	Health, Education, Water, Art and Culture	Tharparkar	Suneel Gurirro	0331-3032005	
2	Human Rural Devepment Organization	Health ,Education	Thraparkar	Ramsingh Sodho	0232-61408	
3	Thradeep Rural Development Programme	Health ,Education.Micro Credit	Tharparkar,Sehwa n,Umerkot	Sono Khangarani	0232-261462	
4	Baahn Bell	Health,Education,wate r Resource	Tharparkar	Aleem Soomro	0232-261221	
5	Thraperkar Social Organization	Health	Mith	Mama Vishan Thari	0232-261825	
6	Participantory village Development Programme	Health,Education Micro credit	Islamkot Domenic Steph		0232-263113	
7	THARIP	Health ,Education	Mithi	A. Haq Jan Sarhandi		
8	Thar Welfare Council	Health ,education	Mithi	Obhayo Junejo	0232-262038	
9	Thar saath	Health	Chachro	Gautam Rathi	0232-273113	
10	Bajeer welfare Association	Health,Education	Mithi	Ahmed Bajeer		
11	Rural Resource Development Organization	Health,Education	Chachro	Naseer Kunbhar	0333-251400	
12	Gothani Aurat Tanzeem	Women Development	Mirpurkhas Region	Khadija Kolachi	0231-78283	
13	Sindh Graduate Association Mithi	Education	Mithi	Dr. Jhaman Jan	0333-251267	
14	Sindh Goth Sangat Tando Kolachi	Village Development & Human Rights	Tando Kolachi	Aisha Kolachi	0231-78283	
15	Karoonihar Welfare Association	Social Development	Nangarparkar	A. Raouf Thebo		
16	Lower Sindh Rural Development Association	Rural Community Development	Lower Sindh	Ashraf J W Mall	0231-61121	
17	Mithi Education Society	Education	Mithi	Ha(i Muhammad Dal	0232-261434	

18	Mithi Welfare Association	Health & Education	Mithl	Kelash Karmani	
19	National Rural Support Programme	Micro Credit,Health,Educatio n,Socail Mob:	District Badin	Coordinator NRSP	0297-862253
20	All Umrani Falahi Tanzeem	Health ,Education	Thraparkar	Zullfqar Umrani	0232-262150
21	Society for Conservation & Protection of Environment	Environment	Tharparkar & Karachi	Tanveer Artf	0232-261916
22	Thar Aid Programme	Women Health & Education	Mithi	Ashraf John	0232-261744
23	Thar Wasi Education Society	Health ,Education	Union Council Bhakuo	Darya Khan Samejo	0232-302247
24	Weenjhar Social Welfare Org.	Water, Health and Education	U/C Kalol	Khalld Mehmood	0232-301484
25	VDO Dedhserh	Water, Health and Education	U/C Jhirmrio	M. Sajan Charo	
26	VDA Malihar	VDA Malihar Health and Education		U/C Sobhiar Shafi Bajeer	
27	Thar Animal Dev. Foundation	The contract of the contract o		Dr. Jaimal Dhanani	0232-261766
28	Thar SEWA	Thar SEWA Social Development		Lal Mohd Bajeer	0333-250143
29	Thar Dhatt Dev. Organization	Social Development	Umerkot	Qasim Soomro	0300-837144
30	Family Painning Association	Family Planning	Tharparkar	Dr. Chaman Sharma	0333-251063
31	All Kolhi Association Sindh	Human Rights	Tharparkar Bhoro Mal Kolh		0333-297483
32	Education Reforms Mirpurkhas	Education	Mirpurkhas Region	Prem Shivani	0232-301160
33	Sami Samaj Sujag Sangat	Social Development	Umerkot	G. Mustafa Khoso	0238-400059
34	Marvi Development Organization	Women Dev. Health and Education	Nabisar	Suresh Kumar	0238-275107
35	Falahi Tanzem Karoonjhar Daulatabad	Social Development	Arld Region of Achro Thar	Wahld Bux Bhayo	0903- 6880057
36	Thar Sangi Welfare Khipro	Health & Education	Taluko Khipro	G. Mustafa Hingorjo	
37	Registan Social Welfare Org.	Health & Education	Chelhar	Shoukat Tabbsum	0333-297630

38	Village Dev. Org.	Water, Health and Education	U/C Joruo	Akbar All Dars	0232-262124
39	Association for Humanitarian Development	Health and Education	Thatta, Hyderabad & Tharparkar	Ashraf John	0221-813768
40	Sojhro Development Organization	Water, Health and Education	U/C Joruo VIII: Mokhar	Kaloo Junejo	0232-302285
41	Parkar Resources & Indegenous Skill Enhancement	Water, Health and Education	Nangarparkar	Fazal Thebo	0232-261791
42	Makhdoom Bilal Welfare Ass. Islamkot	Education, Water, Culture	Islamköt	Ashraf Azad Samon	
43	SPARC- CRC	Rehibilitation of Bonded Laboures	Umerkot	Abdullah Khoso	0238-571760
44	Sustainable Dev. Foundation Sindh	Edu. Advocacy, Health & Environment	Disst. Sanghar	Majeed Mangrio	0235-541666
45	Saajah Welfare Foundation	Edu. Culture, Health, Welfare	Tharparkar	Allah Bux Hingorjo	
46	Desert & Rural Dev. Org. Khipro	Edu. Health, Potable, Water	Taluko Khipro	A. Sattar Hingorjo	0235-814087
47	Association for Action Against Poverty Isamkot	Environment Rehibilitation Poverty Reduction	Tharparkar	Gulab Ral	0232-305446
48	Naujwan Welfare Organization Nangarparkar	Young Generation Development	Taluka Nangarparkar	G. Mustafa Kunbhar	0133-50603
49	SR Help "Sindh Rural Help"	Health	Hyderabad	Dr. Jai Pal Kalji	
50	THE TREE SOCIETY (TREES Humanitarian Support Programme)	Environment, Human Rights, Disaster	Tharparkar Sindh	Dewan Das	334-3735013
51	Sath Sodal Development Organization Saeedabad	Health and Education	Jamshoro		

Part (2). Miscellaneous Annex 5

Taluka Wise information as June 2007

	_	Total	No. of Sc		No. of Sc			labaala	have Faci	ilalaa
Taluka	Level	Main	Branch		Functional		Own Building		B/Wall	Electricit
	GBPS	664	451	1,115	800	315	528	301	220	Labourion
	GGPS	36	173	209	140	89	71	54	47	
	GBLSS	36	43	79	49	30	31	20	17	
NO.	GGLSS	6	1	7	6	- 1	5	2	2	
CHROTEO	GBHS	10		10	10		9	5	8	
	GGHS	-	-	- :		-	-		-	-
	GBHSS	-1	-	1	1		- 1	- 1	- 1	
	Total	753	668	1,421	1,006	415	645	383	295	1
	GBPS	365	348	713	553	160	380	180	143	1
	GGPS	52	82	134	54	80	55	43	42	
	GBLSS	16	47	63	48	15	22	17	11	
ON'S	GGLSS	4	-	4	3	1	4	4	4	-
QM	GBHS	8		8	8	-	8	6	7	
	GGHS	1	-	1	1	-	1	1	1	
	GBHSS									
	Total	446	477	923	667	256	470	251	208	-
	GBPS	398	430	828	620	208	443	219	163	3
	GGPS	70	82	152	89	63	60	42	36	
	GBLSS	44	49	93	88	25	31	29	18	
dis.	GGLSS	5	1	6	4	2	3	2	3	
4400	GBHS	6		6	6	-	8	6	8	
	GGHS	2	-	2	2		2	2	2	
	GBHSS		-							
	Total	525	562	1087	789	298	545	300	228	5
	GBPS	279	241	520	379	141	287	151	118	
	GGPS	21	69	90	67	23	44	25	25	
	GBLSS	14	25	39	22	17	17	13	10	
ARCS CONTROL	GGLSS	1	-	1		1			-	-
De Sulla	GBHS	2	-	2	2	-	2	2	2	
•	GGHS	1		1	1	-	1	1	1	- 5
	GBHSS	1		1	1	-	1	- 1	- 1	
	Total	319	335	654	472	182	352	193	157	
	GBPS	1,706	1,470	3,176	2,352	824	1,638	851	644	4
	GGPS	179	408	585	350	235	230	164	150	1
	GBLSS	110	164	274	187	87	101	79	56	
100	GGLSS	16	2	18	13	5	12	8	9	
Seried Total	GBHS	26		26	26		25	19	23	
*	GGHS	- 4		4	4		4	4	4	ः
	GBHSS	2		2	2		2	2	2	
	Total	2043	2042	4085	2934	1151	2012	1127	888	

Annex 6

District Level Damage, Needs & Assessment Form Format

Date of	f Report District
Part 1	Situation
1.1	Type of disaster
1.2	Date disaster started
1.3	Status of disaster
	() ongoing () ended: date
1.4	Total number of population affected
1.5	Percentage of population affected versus total population in the district %
1.6	Type of area affected
1.7	Worst affected community (specify by name)

Part 2 Effects on Population Who Suffer and in Need of Assistance

Serial Name No. of UCs			No. of deaths	Cause	Cause Number of missing	injured/Sick	Type of sickness	No. of houses damaged				
	100000000	Family	Persons		deaths	1000000			totally	wittajor	withingr	total
2.1			0									
2.2		0										
2.3												
Etc.									100			
Total			20	100					0.00		100	

Part 2 Effects on Population Who Suffer and in Need of Assistance

Serial No.	Name of	Water sources	No. of	Families inside safe areas who need						Families outside safe areas who need				
UCs contaminated	contaminated	safe areas	Shelter	Food	HH Kits	Watsen	Medicine	Feed	HH Kits	Wittsen	Medicine			
2.1		3		.5										
2.2							0 9							
2.5				W 7			1 1							
Etc.														
Total														

Part 3 Effects to Household Property, Agriculture and Livelihood

Sertal No.	Name of UCs	Areas of crops damaged			Major	Other types of livelihood & family properties damaged, specify				operties		
	2000000	Totally	Partially	Total.	Cowfoulfalo	Goat	Cotal	boats				Total
34												
3.2		-			3 9					2		
3-3 Etc. Total				8	3	- 3						
Etc.			10.00		200	1	2		-			
Total				3					-			

Part 4 Effects to Facilities and Infrastructure

,	Name of	Hospital/health centre damaged			Schools damaged			National Road	Secondary Road	No. of	Culverts	Intigetion
	UCs	Totally	Partially	Total	Totally	Pertially	Total	In Km	In Kim	Bridges		scheme
4.1			-			-						
4.2								1 6				
6-3			1									-
Etc.												
Total				_								

Part 5 Summary of Assistance Received by Provincial/Federal Government and any other Source

Type of Assistance	Source	Status of Use and Implementation of Assistance Required	Problems Encountered
5.1			
5.2			
5-3			
5-4			
5-5			
5.6			

Part 6 Possibility of Secondary Hazards during Disaster Situation

1 2 3	
Prepared and submitted by:	Submitted to:
District Authority (DDMA) Date	Provincial Authority (PDMA) Date

Explanatory Notes:

The detailed District Damage Report is based on the UC reports received within 4-5 days
of the disaster occurrence, for onward submission to Province/Federal Departments.

Annex 7

Union Council Level Damage, Needs & Capacity Assessment Form Format

	DI	tuation
1	.1	Type of disaster
1	.2	Date disaster started
1	.3	Status of disaster
		() ended: date
		Total number of villages affected
1.	.5	Percentage of population affected versus total population in the UC
1.	.6	Type of area affected
1.	.7	Worst affected villages (specify by name)

Part 2 Effects on Population Who Suffer and in Need of Assistance

Serial No.	Name of	Total affe	cted people	No. of	Cause of								
	UCs	Family	Persona	deaths	deaths	missing	Slok	sickness	totally	м/ты/ог	w/minor	total #	
2.1													
2.2										- 3		9	
2.3													
2.3 2.3 Etc.						8		10					
Total													

Part 2.1 Effects on Population Who Suffer and in Need of Assistance

Serial No.	Name of	Water sources	No. of	Farr	Families Inside safe areas who need				Families outside safe areas who need				
	UCI	contaminated	safe areas	Shelter	Food	HH	Watsan	Medidne	Food	HH KIIS	Watsan	Medkine	
2.1	7 /				7							9	
2.2	7				1							9	
								7			- 2	4	
Elc.													
Total									1				

Part 3 Effects to Household Property, Agriculture and Livelihood

Serial No.	Name of UCs	Areas	of crops dam	aged	Major livestock killed		Other types of livelihood & family properties demaged, specify					
	1	Totaly	Partially	Total	Cowjbuffalo	Coat	total	bosts				Total
3.1												
3-3 Fite. Total												
3-3			1		8.			3 8			2.	
Etc.					0							
Total		/			0							

Part 4 Effects to Facilities and Infrastructure

	Name of UCs		tai/health o derruged	entre	Sch	ools damag	ped	National Road In Km	Secondary Road In Km	No. of Bridges	Culverts	irrigation scheme
		Totally	Partially	Total	Totally	Partially	Total					
4.1												
4.2												
4-3												
Etc.										10		
Total												

Part 5 Summary of Assistance Received by Provincial/Federal Government and any other Source

Type of Assistance	Source	Status of Use and Implementation of Assistance Required	Problems Encountered
5.1			
5.2			
5-3			
5-4			
5-5			
5.6			3

Part 6 Possibility of Secondary Hazards during Disaster Situation

1 2 3	
Prepared by:	Received by:
UC Authority Date	District Authority Date

Explanatory Notes:

The purpose of the UC Level Damage Report is to report in detail the extent of damages
for each vulnerable element: particularly population, household property, agriculture,
community and public facilities, the priority needs of population, the type and quantity of
assistance provided at the district level and the additional need for outside assistance.

Annex 8

Village Level Damage, Needs & Capacity Assessment Form Format

ı.	Name of Village Organization:
II.	Description of the Disaster Event:
	Disaster:
	Date of Occurrence:
	Duration (Description):
III.	Affected Area:
	(Address: Village/City/District/Region/Province)
	Total Population:
	Total No. of Families in village:
	Total No. of Families Affected:
IV.	Damage to Structures:
	No. of Families Who Own Their Houses:
	No. of Families Who Lease:
	No. of partially destroyed:
	No. of completely destroyed:
v.	Damage to Livelihood
	1
	2.
	3
1/1	Present Location of the Survivors
VI.	
	Did the affected families evacuate or do they remain in their respective homes?
	(If the answer to the above is yes, answer section A or B below.)
a.	Evacuation Centres (Specify name, location, distance from the place of origin)
	When did the families move to the evacuation centre?
	2. How many are staying in the centre?
	3. Is there enough ventilation?
	4. How are waste and excreta disposed of?
	5. Are there enough latrines?
	Are there sources of potable drinking water?

- In the absence of an evacuation centre, please specify present location of the survivors and give brief description of the physical condition of the place
- VII. Emergency Assistance Received from Other Organizations

Name of Organization	Assistance Extended	Date	Quantity/Estimated Amount

. Ide	entification of Needs of Tar	get Beneficiaries
1.		
3.		
Ot	her Items Needed	
1.	Kitchen Utensils: what, ho	w many and why?
2.	 Sleeping materials: What, how many and why? No. of families in need of materials for temporary shelter (Plastic Sheets) 	
3.		
. Ac	iditional Information on the	Area
epor	t Prepared by:	Submitted to:
illage	Committee	UC
	nistration	Date
ate		

Section No. 8

Sources and References

Consultations and meetings:

- District Coordination Office
- District Revenue department
- District Agriculture department
- District Finance and Planning Department
- District Social Welfare and community development
- District School and Literacy Department
- Environment Department
- Tehsil Municipal Administration secretariat
- Medical Superintended, District Head Quarter Hospital Distt. Tharparker

References and Reports:

- National Disaster Risk Management Framework Pakistan
- District Disaster Risk Management Planning Guidelines (NDMA)
- National disaster management Ordinance NDMO
- District Health Profile by EDO Health
- District Profile by District Coordination Office

Websites:

Pakistan Government
Pakistan Meterological Department
National Disaster Management Authority
National Reconstruction Bureau
Government of Sindh
UNDP Pakistan
ADB Pakistan
ASIan Disaster Preparedness Center
Centre for Research on the Epidemiology of Disasters
Population Census Organization; Federal Bureau of Statistics, Pakistan.

http://www.pakistan.gov.pk http://www.pakmet.com.pk/ http://www.ndma.gov.pk/ http://www.nrb.gov.pk/ http://www.sindh.gov.pk http://www.undp.org.pk http://www.adp.org http://www.adpc.net http://www.cred.be/ www.statpak.gov.pk