

## DISTRICT DISASTER RISK MANAGEMENT PLAN DADU - 2016









## **District Disaster Risk Management Plan**

2016

**District Dadu** 

**Government of Sindh** 

## **TABLE OF CONTENTS**

Acknowle	dgements	1
List of Acr		2
Distribution	·	3
Executive	Summary	4
Planning A	,	6
_	of the plan	6
	ents to the Plan	6
Review ar	nd Update	6
	ission and Objectives	7
-	oncepts & Terms used in Disaster Management	8
<b>SECTION</b> :	1:	13
Overview	of the District Dadu	13
1.1	General description of the district	13
1.2	Geography	14
1.3	Demography	14
1.4	Religion and tribes	15
1.5	Languages	16
1.6	Cropping Patterns	16
1.7	Livestock	16
<b>SECTION</b>	2:	
Areas at F	Risk: Hazards, Demography and Vulnerability Context	17
2.1	Hazard Analysis	17
2.1.1	Hazard Time line	17
2.2	Demography in areas at risk	20
2.3	Longer term trends (vulnerability context)	21
2.4	Livelihoods and Vulnerability	22
2.4.1	Zone 1 Canal Irrigated (Pacco zone)	<b>2</b> 3
2.4.1.1	Livelihood groups, vulnerability and poverty	<b>2</b> 3
2.4.1.2	Seasonality	24
2.4.2	Zone 2: Riverine (Kacha zone)	24
2.4.2.1	Livelihood groups, vulnerability and poverty	24
2.4.2.2	Seasonality	25
2.4.2	Zone 3: Rain fed (Kachho) Zone	26
2.4.3.1	Livelihood groups, vulnerability and poverty	26
2.4.3.2	Seasonality	27
<b>SECTION</b>	3:	
Respondi	ng To Disasters: Communities and External Assistance Needs	29
3.1	Community coping mechanisms	29
3.2	Type, timing, quantities and costs of material support for exceptional events	31
3.3	Response Strategies For Various Hazards	32
3.3.1	Response to floods in Riverine (Kacha ) as well as Canal irrigated (Pacco) areas of	32
	district Dadu	
3.2.1.1	Assisting communities after floods.	32
3.3.1.2	Sequence of response interventions to farming livelihood after floods	34
3.3.2	Response to Torrential Flooding in Rain fed (Kachho) Zone Belt.	34
3.3.2.1	Sequence of response interventions to farming livelihood after floods	35
2 2 2	Response strategy to drought in Rain fed (Kachho) Zone of district Dadu	37

3.3.3.1	Sequence of response interventions to the farming community of Rain-fed (Kachho) Zone after drought	38
SECTION 4	:	
Gender an	d Vulnerable Groups in Disasters	40
SECTION 5		
District Dis	saster Management Authority (DDMA), its structures and roles and responsibilities	41
of key stal		
5.1	District Disaster Management Authority	41
5.2	Composition Of District Disaster Management Authority (DDMA)	41
5.3	Powers and functions of District Authority:	42
5.4	Role And Responsibilities Of Different Departments	44
SECTION 6		
	tion and SOPs	48
6.1	District Disaster Contingency Plan	48
6.2	Aims And Objectives	48
6.3	Control Room	49
6.4	Activation Of Emergency Committees	49
6.5	Specific responsibilities of other stakeholders:	56
6.6	Coordination Mechanism	59
6.7	Warning Mechanism	60
6.8	Public Information	60
6.9	Request For Assistance	61
6.10	Requirements	61
6.11	Reporting	61
6.12	Community Involvement and Participation	61
6.13	Organizing the Drills	62
ANNEXES		
Annex 1: D	Detailed Contingency Plans	
Annex 2: A	at Risk Population Numbers	
Annex 3: L	ist of Important Contacts:	
Annex 4: Ir	nstitutions For Livelihood Support	
	Health Facilities 2009-10 In Public Sector - Dadu District	
Annex 6: R	Resources Available with Municipal Committee (All)	
	opulation and Housing Data At Village & Union Council Level	
	ist of Village Development Committees	

Annex: 9 List of NGOs in district Dadu

## **DISCLAIMER**

The District Disaster Risk Management Plan has been prepared to serve as an aid for developing further plans / strategies to avoid or reduce adverse consequences that might otherwise occur in the event of a disaster. Due to constantly changing environments, weather conditions, policies, etc., this plan may not contain the most recent emergency response decrees or findings. This plan is based on the findings during meetings with different stakeholders, previous disaster response plans of district Dadu, expertise of the authors. Therefore we make no warranty, expressed or implied, nor assume any legal liability or responsibility for the accuracy, completeness, or usefulness of any information, product or process disclosed and assumes no liability for any injury, death, or property damage which may occur in connection with any disaster. It is solely the responsibility of the user to research on the changes, if so any, and validity of the data provided in this plan.

This plan is a live document and it should be regularly updated by the concerned authorities based on the feedback provided by the stakeholders, availability of more accurate and authenticated information or after any big disaster.

## **Acknowledgements**

We would like to express deep gratitude to the following for their guidance, encouragement, gracious support throughout the development Disaster Risk Reduction Plan for district Dadu. This plan is result of great support and extensive consultation of these personnel and without their support it was not possible to formalize this plan:

- Deputy Commissioner
- Members of District Disaster Management Authority (DDMA) Dadu
- Line Departments
- Local NGO / CBOs
- UN FAO, UN ILO, UN Women
- Local communities
- Media

## **List of Acronyms**

CP Contingency Plan

DA District Administration

DC Deputy Commissioner

ADC-I Additional Deputy Commissioner-I
ADC-II Additional Deputy Commissioner-II

AC Assistant Commissioner

DDMA District Disaster Management authority
DDRMP District Disaster Risk Management Plan

DM Disaster Management
DP Disaster Preparedness
DRR Disaster Risk Reduction
DRM Disaster Risk Management

FAO Food and Agricultural Organization of the United Nations

HR Humanitarian Response

NGO Non-Governmental Organization

INGO International Non-government-organization

LBOD Left Bank Outfall Drain

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

NDMA National Disaster Management Authority
PDMA Provincial Disaster Management Authority
SPO Strengthening Participatory Organization
NDMO National Disaster Management Ordinance

PH Public Health

TMA Taluka Municipal Administration

UNDP United Nations Development Programme

IDP Internally displaced person.

IOM International Organization for Migration

UN Women United Nations Entity for Gender Equality and the Empowerment of Women

## **Distribution List**

- National Disaster Management Authority (NDMA)
- Provincial Disaster Management Authority (PDMA)
- District Disaster Management Authority (DDMA)
- District Council
- District Line Departments
- Police Department
- Municipal Authorities
- Pakistan Red Crescent Society
- District Hospitals
- Meteorological Department
- Educational Institutes
- Civil Defense
- United Nations Women (UNW)
- Local NGOs / CBOs, Community groups
- Local Media
- Armed Forces, Rangers
- Private sector
- Religions group and leaders

#### **EXECUTIVE SUMMARY**

District Dadu is situated on the right bank of river Indus, thus prone to floods and other natural hazards. District Dadu was initially created in 1933 by merging four tehsils from Larkana district and three from Karachi district. Till 2004 district Dadu was titled as the largest district in terms of geographical area in Sindh province, in 2004 another district named Jamshoro was carved out from district Dadu by separating three tehsils from Dadu district. Currently district Dadu comprises on 4 tehsils namely Mehar, Dadu, Khairpur Nathan Shah and Johi. These four tehsils are further divided into 52 union councils and 3,268 villages. The estimated population of District Dadu in 2012 is around 1,674,003 persons. The geography of district Dadu covers the hilly terrain of Khirthar ranges along the border of Baluchistan and plain terrain along with River Indus. Total area of district Dadu is around 7,866 square kilometers.

In general segregation, the district is divided into three geographical zones: (1) plain areas which are cultivable through canal irrigation system called "Pacco" in local terminology, (2) the low laying areas around river Indus/ river bed called "Kacho" in local terminology and (3) the Rain-fed hilly terrain which is termed as "Kachho". All three major zones have their own specific characteristics and hazard profiles. Similarly, the livelihood and lifestyle in all three zones are also different. The people living in canal irrigated (Pacco) zone have their own physical characteristics, vulnerability level, wealth ranking, and livelihood sources, quite different from those living in riverine or rain-fed zone. The major livelihood source in district Dadu is identified as agriculture and livestock.

District Dadu is one of the most disaster prone districts in Sindh province. The mighty river Indus is a regular source of floods in the plain areas. The rainfall on Khirthar ranges creates the flash floods in the rain-fed (Kachho) belt, while insufficient rainfall in the same region generates drought conditions. The effects of all above hazards are multiplied due to deficient civic facilities and infrastructure.

The most common hazards listed in the region are riverine floods, torrential floods and drought which cause significant damage to the livelihoods of the inhabitants in the district. For these common hazards, response strategies have been prepared based on understanding of the seasonality of livelihoods and current population at risk. These quantifications formed the basis for livelihood-based contingency plan for each hazard for use by district authorities and other stakeholders in pre-disaster planning, possible stockpiling and financial provisioning.

Table 1 below shows the hazards in the region and expected caseload of populations at risk. This information is very critical in planning the rescue operation and relief as well as rehabilitation services.

Table: 1 - Hazards and Population at risk

Hazard	Over	all total a	t risk	А	t High Ris	sk	At Medium Risk			
	Male	Female	Total	Male	Female	Total	Male	Female	Total	
River Flood	216,823	201,286	418,108	89,465	82,037	171,502	127,357	119,249	246,607	
Torrential Flood	217,380	200,215	417,595	158,723	147,225	305,948	58,657	52,989	111,647	
Drought	187,771	118,128	167,901	40,722	36,421	77,143	147,049	81,707	90,758	

As per the estimates of Dadu local government (Nov 2010) a total of 1,166 villages with a population of 920,105 were directly affected due to the heavy monsoon and resulting floods in 2010. The roads, bridges, culverts, government offices, schools and colleges were flooded away.

Electric supply remained suspended to villages and towns for months. This figure reveals that almost 70% population of district Dadu was affected as river flood was coupled with torrential floods. The total at risk population of both hazards is around 835,000 persons, while the affected as reported by NDMA during 2010 floods was even more than that, which is due to unexpected heaviest rainfall in the history of the region. The average annual rainfall of Dadu district is around 120 mm per year but the rainfall recorded during 2010 was more than 800 mm in one month.

This Hazard, Livelihood and Vulnerability (HLV) Baseline and Contingency Plan has been prepared to assist the district administration, UN agencies, I/NGOs and civil society in effective disaster response. The HLV has been conducted through a highly participatory approach involving major stakeholders at district, Tehsil and community levels. The representatives of NDMA / PDMA / DDMA, Government line agencies, UN agencies and NGOs showed their pro-active involvement to contribute in this document, and for this reason it constitutes a common assessment of the hazards' baseline situation analysis in the district and should be used by all stakeholders as a key planning, preparedness and response tool.

The document will support the assessments of first responders after disasters. The HLV based contingency plan also considers the specific needs of affected populations in terms of food, WASH, shelter, livelihood and rehabilitation along with the timeline and duration/ phase. This HLV based contingency plan provides the initial baseline and is a live document to plan strategies / response.

## **Planning Authority**

District Disaster Risk Management Authority (DDMA), headed by Deputy Commissioner (Chairman), DO, Civil Defense as Member/Secretary, and ADC I & II, Superintendent of Police, DHO, AD – SW, Representative of Civil Society as members.

## **Approval of the Plan**

DDMA / District Council is the approval authority for District Disaster Risk Management Plan

## Amendments to the plan:

If and when required, the planning authority will propose the amendments to the District Disaster Risk Management Plan, while DDMA / District Council have the right to approve the amendments in the Plan.

## **Review and Update:**

This plan, as per the directions from NDMA will be review after three years or after a big disaster.

## **Vision, Mission and Objectives**

#### **Vision**

District Disaster Management Authority aspires to keep this district resilient to natural calamities through well-coordinated, integrated and concentrated efforts by creating linkages between all stakeholders.

#### Mission

Formulation of criterion plan for smoothing the progress in capacity building of District Government of Dadu, line departments and communities aiming at pre-disaster preparedness, instantaneous, coordinated and effective disaster response, relief and rehabilitation.

## **Objectives**

- 1. Provision of a base for the formation of DDMA which would formulate policies and procedures regarding disaster management in district Dadu ensuring maximum and professional utilization of all resources in the district aiming at decreasing the vulnerabilities of its subjects to hazards and disasters.
- 2. To strengthen early warning system and early response to disaster hazard threats and disaster situations in Dadu.
- 3. To enhance institutional capacities and exchange of information among stakeholders involved in early warning system, disaster risk management, disaster response, development and other relevant agencies and institutions at all levels, with the aim of fostering a holistic approach towards disaster risk reduction and sustainable development.
- 4. To prepare communities and institutions to act and be equipped with knowledge and capacities for effective disaster risk management at times of disaster in order to reduce losses and damage to lives and property and to include communities, in disaster risk management fo the development of specific mechanism to engage active participation and ownership of relevant stakeholders.
- 5. To execute regular disaster preparedness exercises, including evacuation drills, with a view to ensure rapid and effective disaster response and access to essential food and non-food relief supplies, as appropriate, to local needs.
- 6. To initiate emergency funds, where and a appropriate, to support response, recovery and preparedness measures as part of a sustainable way to disaster risk management.

# **General Concepts & Terms used in Disaster Management**

#### 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

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

#### Disaster risk management

Disaster Risk Management is a 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 risk 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**

Early warning system is 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 rehabilitations

#### **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

Hazard means to potentially damaging physical event or phenomenon that may cause the loss of life or injury, property damage, social and economic disruption or environmental degradation. Hazards can include natural (geological, hydro-meteorological and biological) or induced by human processes (environmental degradation and technological hazards). Hazards can be single, sequential or combined in their origin and effects. Each hazard is characterized by its location, intensity, frequency and probability.

#### Hazard analysis

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

#### Gender

Gender refers to the social attributes and opportunities associated with being male and female, the relationships between women and men and girls and boys, and the relations between women and between men. These attributes, opportunities and relationships are socially constructed and learned through the socialization processes. They are context-/time-specific and changeable. Gender determines what is expected, allowed and valued in a women or a man in a given context. In most societies there are differences and inequalities between women and men in decisionmaking opportunities, responsibilities assigned, activities undertaken, and access to and control over resources. Gender is part of the broader sociocultural context. Other important criteria for sociocultural analysis include class, race, poverty level, ethnic group and age.

#### **Gender Equality**

Gender equality refers to the equal rights, responsibilities and opportunities of women, men, girls and boys. Gender equality is achieved when the different behaviours, aspirations and needs of women and men are equally valued and favoured and do not give rise to different consequences that reinforce inequalities.

#### **Gender Mainstreaming**

It is a strategy for making women's as well as men's concerns and experiences an integral dimension of the design, implementation, monitoring and evaluation of policies and programmes in all political, economic analysis include class, race, poverty level, ethnic and societal spheres so that women and men benefit equally and inequality is not perpetuated. The ultimate goal is to achieve gender equality." In simple terms, gender mainstreaming is undertaken within sector work, such as in education and shelter interventions, to make sure that the benefits of the sector are equally enjoyed by women and men.

#### **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 hazards are 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 of general masses to 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 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 increased by learning from past disasters for better future protection and to improve risk reduction measures.

#### **Retrofitting (or upgrading)**

Retrofitting is a process of 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 = hazard x Vulnerability. Some experts also include the concept of exposure to refer to the physical aspects of vulnerability.

#### Risk assessment/analysis

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

Sustainable development is a process of 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 activates, 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.

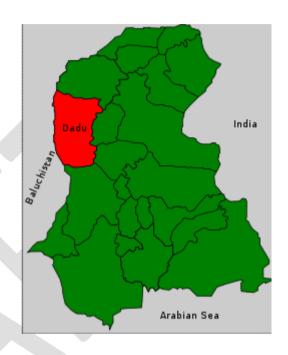


## **Section 1:**

## **Overview of the District Dadu**

## 1.1 General description of the district

District Dadu is situated on the right bank of river Indus, thus prone to floods and other natural hazards. District Dadu was initially created in 1933 by merging four tehsils from Larkana district and three from Karachi district. Till 2004 district Dadu was titled as the largest district in terms of geographical area in Sindh province, in 2004 another district named Jamshoro was carved out from district Dadu by separating three tehsils from Dadu district. Currently district Dadu comprises on 4 tehsils namely Mehar, Dadu, Khairpur Nathan Shah and Johi. These four tehsils are further divided into 52 union councils and 3,268 villages. The estimated population of District Dadu in 2012 is around 1,674,003 persons. The geography of District Dadu covers the hilly terrain of Khirthar ranges along the border of Baluchistan and plain terrain along with River Indus. Total area of district Dadu is around 7,866 square kilometers.



In general segregation, the district is divided into three geographical zones:

- A. Plain areas which are cultivable through canal irrigation system called "Pacco" in local terminology
- B. The low laying areas around river Indus/ river bed called "Kacho" in local terminology and
- C. The Rain-fed hilly terrain which is termed as "Kachho".

All three major zones have their own specific characteristics and hazard profiles. Similarly, the livelihood and lifestyle in all three zones are also different. The people living in canal irrigated (Pacco) zone have their own physical characteristics, vulnerability level, wealth ranking, and livelihood sources, quite different from those living in riverine or rain-fed zone.

## 1.2 Geography:

District Dadu is situated on 26o20'0"N,67 o35'0"E. Created in 1933 by the British Indian administration by merging Kotri and Kohistan tehsils from Karachi district and Mehar, Khairpur Nathan Shah, Dadu, Johi and Sehwan tehsils from Larkana district.

In 2004 another district by the name of District Jamshoro was carved out of District Dadu which comprised of Taluka Kotri, Taluka Sehwan, Taluka Thano Bola Khan and Taluka Jamshoro which is the headquarter. After bifurcation, the current Dadu district was limited to 4 tehsils as detailed below.

Tehsil	Union Councils	Total UCs
Dadu	Allahabad, Dadu I, Dadu II, Dadu III, Dadu IV, Khudabad, Mian Yar Mohd, Moundar, Mukhdoom Sahib, Muradabad, Pairo Station, Pat, Phulji Station, Pipri, Sial	15
Johi	10	
Khairpur Nathan Shah	Bughia, Burira, Butra, CHHore Qamber, Gozo, Kakar, Kandichecki, Khairpur Nathan, Mitho Babar, Parya, Seeta Road, Thadeo	12
Mehar	Baledai, Bali Shah, Betto, Bothro, Faridabad, Gahi Mahesar, Kazi Arif, Kolachi, Mangwani, Mehar, Nau Goth, Radhan, Saeedpur, Shah Punio, Tharirimohbat	15

## 1.3 Demography:

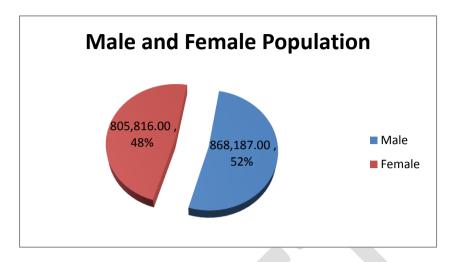
The average household size of the district is 5.5 persons, which is higher in urban areas at 6.3 as compared to that in rural areas at 5.3 implying more congestion in urban areas.

More than 73% of the housing units in Dadu district are single room houses. The average annual rainfall in the district is about 120 millimeters. The total area under forest in district Dadu is 217,000 hectares yielding timber and firewood.

04
52
3268
1674003
34.65//10,000
9/1000
2.65%
53% of population
47% of population

Dadu is situated on Right Bank of River Indus with a projected population (2012) estimated at 1,674,003 (868,187 Male and 805,816 Female) with 303,761 households. The geography consists of 78.63% of hilly terrains of Khirthar ranges and 21.37% plain area which encompass most of agriculture productive land. Dadu is the capital of Dadu District. Total

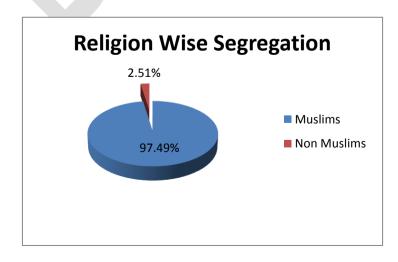
area of the district is 7,866 Sq Km. The district has four Talukas including Dadu, Johi, Khairpur Nathan Shah and Mehar. It has 52 union councils.



Most of the remote villages are deprived of the basic social services such as Schools, Basic Health facilities, water supply Schemes, Sui Gas and Telephone. The women share the work burden with their male members as working in the fields in sowing and harvesting seasons, livestock and traditional handicrafts making. Due to the non-availability of hospitals or dispensaries, in the village women and children suffer more from various diseases while male members can travel in far areas to seek medical care. The major source of income is agriculture and livestock. Most of the inhabitants are sharecroppers and few of them have their own piece of land. They live in cluster houses with their extended family members composed of an average of 12 houses with more than 70 family members.

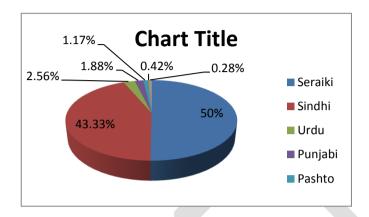
## 1.4 Religion and tribes:

The 97.49% population of the district is Muslims. The population of others religions is Hindus 2.05%, Christians 0.37%, Ahmaddiyas 0.08% and others 0.02%. The Muslims could be divided into two ethnic groups - Samat and Balochs; Samats include Qazi, Sheikh, Meerani, Mirbahar and Brohi Tribe, Chandio Tribe and others. The Balochs include Jamali, Khosa, Gabol Lund, Bozdar, and others.



## 1.5 Languages:

Mainly Seraiki 50% and Sindhi 43.33% are the widely spoken languages in the district. The other languages include Urdu 2.56%, Punjabi 1.88%, Pashto 1.17%, Baluchi 0.42% and others 0.28%.



## 1.6 Cropping Patterns:

Al crops of Kharif and Rabi are grown in the district. Some of these crops are wheat, rice, cotton, sugar cane, maize, barley, jowar, bajra, gram, sesame, and tobacco. Wheat and fodder are major crops in arid area (Kachho). The District is fed by Sukkur Barrage. There are two main canals in the District (i) Rice Canal (ii) Dadu Canal. There are two main crop seasons; "Kharif" and "Rabi" in Dadu District. The Kharif season starts from April-May and ends in October-November while the Rabi starts from November-December and ends in April-May. The major crops include; Wheat, Cotton, Rice, Sugar-cane followed by Barley, Jowar, Gram, Rapeseed & Mustard. People mostly depend on agriculture, and practice sharecropping along with their own small land holdings. The total cultivable area in the district is 193,779 acres.

#### 1.7 Livestock:

The farming of livestock is considered as a major occupation in district Dadu especially in the area of Kachho. Many tribes are involved in this business and earn livelihood through this mean. The population of animals is about 2.3 million including buffaloes, cows, goats, sheep, camels, and others. The disasters such as droughts, floods, are causing serious losses to these numbers.

## **Section 2:**

# Areas at Risk: Hazards, Demography and Vulnerability Context

## 2.1 Hazard Analysis

One of the important functions of the fieldwork for the compilation of the HLV baseline is to get a consensus from key stakeholders in the district on the frequency, severity and geographical impact of hazards within the district.

As explained earlier the Dadu district consists of a mix of mountainous and plain areas and could be it divided into 3 zones: (i) Canal Irrigated (Pacco) Zone (ii) Riverine (Kacha) Zone and (iii) Rain fed (Kachho) zone. The Riverine (Kacha) zone which is located along the river Sindh has to face heavy flood during monsoon. The table: 2 below show that all Riverine (Kacha zone) areas have been confronted with riverine flood during several years since 1939. However, the recent flood of 2010 has affected the whole district due to the severity of flood. The Rain-fed (Kachho) zone, has faced torrential flood in 1995 and 2007. The same areas have also been hit by severe and prolonged drought during 2001 to 2008. The drought directly affects people socially and economically. The region also experiences continued hardships in terms of basic facilities such as infrastructure, health, education, drinking water etc. due to its remote location. There are two extreme climates, hot in summer and cold in winter

#### 2.1.1 Hazard Time line

The following table sets out a historical time line for hazards in the district. The table was compiled from discussions with key informants at the District and Tehsil levels. The information was also validated with communities during the field visit to hazard prone communities. For each hazard event, informants were asked to score the event in terms of physical damages and economic losses. The range of scoring is from 0 to 5 (5 being the most severe). The scores were then accumulated to derive an average overall impact score with 10 being the highest overall impact.

Table: 2 Historical Time lines for major disasters in Dadu district

Hazard	Year	Season	Geography	Physical damages (Score)	Economic and financial losses (% Score)	Overall Impact (Sum of score)
River Floods	1939- 1942	July-August (Monsoon)	All areas near River beds	<b>5</b> - Agriculture land, houses, camps in Karachi, Nawab Shah Livestock & human loses, other than infrastructure, Dadu, Tharparkar, IDP camps were established	4	9
	1972	Monsoon	All Riverine (Kacha) Areas	4	4	8
	1976	Monsoon	All Riverine (Kacha) Areas.	3 - Houses were inundated	3	6
	1995	Monsoon	All Riverine (Kacha) Areas	4 - After every two or three years, flood comes frequently when heavy rain comes and high flow or overflow of water from river or canals/ drains. (FP band, MNV Drain and Naen Gaaj) Agriculture fields destroyed	3	7
	2010	Monsoon	The whole district inundated	5	5	10
Torrential Flood	2005	Monsoon	RAIN-FED (Kachho) Zone hill side	4 - Struck during midnight 1800 human loses (1976) livestock, HH assets and other valuable things damaged. crops, houses, livestock perished due to disease in Tehsil K N Shah	4	8
	2007	Monsoon	RAIN-FED (Kachho) Zone hill side	4	4	8
Drought 2001-2008	2001	Severe /yearly	Johi Taulka, K.N Shah Taulka and Mehar Taulka Villages of Lahno Khan Jamali, Mohammad Ali Jamali village, Tando Raheem Khan, Jano Jiskani Sohiri, Chiddi and Wali Mohammad, Fateh Brohi, Nangar Dario, Kando Babar, Mazari, Mazar Bhurgari, Nabo Birhamani, Naseer Mohammad, Karim	4 Depletion of underground water, Dust allergies common, Unable to cultivate land due to brackish water	The majority of people of Rain-fed (Kachho) Zone area migrated to other places as the situation in the Khirthar mountains has worsened owing to drought three died 500 cattle heads	7

			Rodhnani and Morio Chandio		perished due to fodder shortage and	
					diseases. Women had to bring water from far off areas as a result of fast drying up of wells Majority of the families migrated to other areas Saline and brackish water related diseases.	
Water, sanitation & water logging		Ground water contamination, arsenic poison, subs soil water.	Entire district	4	3	7
Deforestation	Every year	Rain-fed (Kachho) Zone Areas	Depletion of underground water Dust allergies, Unable to cultivate land due to brackish water.	3	3	6

To derive an overall picture of the physical and economic impact of the different types of hazards the physical damage, economic loss and overall impact scores per hazard were averaged in order to prioritize the most harmful hazard. The results of this are presented in the following hazard matrix table.

Table: 3 Hazard Matrix of district Dadu

Hazard	Frequency (from known data of 100 years)	Season	Geography	Total Physical Damage Score	Total Economic Loss Score	Overall Impact Score (Average)
Riverine Floods	Eight times	July-Aug (Monsoon)	All areas near River beds (All Kachha areas)	21	19	20
Torrential Floods	Two times	July-Aug (Monsoon)	Rain Fed(Kachho) Zone hill side	8	8	8
Drought	One time but prolong since 2001 to 2008	Throughout the year	Talukas Johi K.N.Shah and Mehar	4	3	3.5
Water, sanitation and water logging	Every year	Throughout the year	Entire district	4	3	3.5
Deforestation	Every year	Throughout the year	Rain-fed (Kachho) Zone areas	3	3	3

## 2.2 Demography in areas at risk

Detailed discussions with key informants at district level indicated that a number of Union Councils (UCs) were at high risk of being directly affected by riverine floods, torrential floods and drought. The UCs identified as high risks were those in which it was highly likely that flood would affect more than 50% of the villages. UCs at medium risk was those in which flood typically affected between 30 and 50% of villages. The overall picture is presented in table 4<sup>1</sup>.

Table 4: Summary table of populations at high and medium risk from different hazards in District Dadu

Hazard	Over	all total at	Risk	At High Risk			At Medium Risk			
nazara	Male	Female	Total	Male	Female	Total	Male	Female	Total	
River Flood	216823	201286	418108	89465	82037	171502	127357	119249	246607	
Torrential Flood	217380	200215	417595	158723	147225	305948	58657	52989	111647	

<sup>&</sup>lt;sup>1</sup> See Annex 2 for breakdown of at risk populations by UC

-

## 2.3 Longer term trends (vulnerability context)

Table 3 of hazard analysis reveals that the district is particularly prone to both riverine and torrential floods. Additional hazards include droughts, water sanitation and water logging, and deforestation.

In the Riverine (Kacha zone), land tenure is a key factor that impacts upon vulnerability. Most of the land is owned by large landlords. They cultivate their land through tenants living in these areas mostly on share cropping. The small land owners in general and large land lords in particular do not make long-term investments, due to prevailing uncertainty in the form of flood during monsoon season. Because of this, small farmers who either cultivate their own land or on share basis, remain unable to improve their economic conditions.

The prolonged drought occurrence in rain-fed (Kachho) Zone of Dadu is a serious issue. The drought directly affects people socially and economically. The region also experiences continued hardships in terms of basic facilities such as infrastructure, health, education, drinking water etc. due to its remote location. There are two extreme climates, hot in summer and cold in winter. The subsoil water is brackish therefore, women walk long distances to fetch water from temporary wells and ponds. Unfortunately, water from temporary wells turns brackish after a short period of time after being dug. The irrigation system is very poor and therefore, agriculture is dependent on scarce rainfall. This increases the vulnerability of a large portion of the population to the effects of a drought. People derive their major livelihood from agriculture, livestock farming and rope making.

The Riverine (Kacha) zone has forest area over both banks of river Indus, which is the main source of timber wood, fire wood and fodder. The increasing deforestation in Riverine (Kacha zone) area is an emerging environmental problem due to indiscriminate cutting of forest trees. The trees are cut for commercial fire wood, fodder and commercial purposes (logs). Some trees produce wild fruits (PILU) as an alternative livelihood source. According to an estimate, local people transport 10-12 trolleys of wood on daily basis only from kacha area. Trees are also quickly drying up due to drought.

Clean drinking water is pre-requisite for a healthy life. The major sources of drinking water in urban areas of Dadu district are piped water, through overhead tanks, which are filled through reservoirs or boreholes, while, in rural areas the major sources are borehole or well with hand pumps and small water reservoirs (ponds). The rural population distribution is very scattered in mainly small settlements. Urban localities are covered with water supply of piped water, covered sewerage and open drain system. The majority of the drinking water

sources in both urban and rural area have been contaminated by the recent flood of 2010, water forcing communities to use unsafe drinking water. Moreover the available sanitation system has also been damaged by the recent floods. The rehabilitation work has been started by the government as well as various NGOs in the badly affected areas of the district.

## 2.4 Livelihoods And Vulnerability

There are certain reasons for dividing the district into different zones. First because there are some significant differences between the zones in terms of overall livelihood patterns and second because the kinds and severity of hazards faced are different. In the Canal Irrigated (Pacco zone) big landlords have land up to 3000 acres. There is a variety of livelihood groups in this zone and most of the industry is situated in the zone. Households in the Canal Irrigated (Pacco zone) have comparatively more opportunities of off-farm income due to more industry and education opportunities.

The Riverine (Kacha zone) is mainly comprises of riverine areas. The areas along the river side are more prone to flood. Majority of people said that flood has impacted their lives to a greater extent causing persistent poverty. The heavy flow of water during floods 2010 damaged almost half of flood protective and Manchar lake embankments. People from 41 union councils out of 52 suffered heavy losses. Majority of the small farmers have also kept livestock to have an additional income by selling milk.

Rain-fed zone is also called Kachho in local terminology. Agriculture is mostly based on rainfall. Basic amenities in the zone are nonexistent. There is huge water scarcity from March till July-August. During this period rain water is the only source of irrigation and drinking purposes. The increasing deforestation in rain-fed (Kachho) Zone is an emerging environmental problem due to indiscriminate cutting of forest trees. The trees are cut for commercial fire wood, fodder and commercial purposes (logs).

Differences in general livelihood patterns and hazard types mean it is sensible to analyse livelihood, vulnerability and response options in the three zones separately.

## 2.4.1 Zone 1 Canal Irrigated (Pacco zone)

### 2.4.1.1 Livelihood groups, vulnerability and poverty

The following table lists the main sources of livelihood in Canal Irrigated (Pacco) zone and its relationship between wealth status and the role of on-farm and off-farm employment in overall livelihood. The very poor group belongs to off farming community and rely more on local employment on a daily basis for food and income. Those who are landless farmers and practice farming on share basis also fall under poor category. However, they are bit better then unskilled labour. Most of the proportion of population belongs to lower medium group who are involved in different occupations such as crop farming, fish farming, govt. service, skilled labour and transporters. Only 5% fall under very rich group who are big land lords or doing other business. The middle farmers who have 50 to 300 acres of land along with 50-60 numbers of livestock are rich medium and constitute only 10 % of the residents.

**Table 5: Livelihood Groups In Dadu** 

Livelihood Group	Characteristics	Wealth And Vulnerability Status	Proportion In Overall Population
Land Lords	Land-500-3000 acres Politics, business, industries, transporter, shops, patrol pump, properties, stock exchange	Very Rich	5%
Middle Farmer	50-,500 acres 50-60 cattle heads	Rich-medium	10%
Small Farmer + Livestock holders	1-20 acres Large animals 20-30, small animals	Lower medium	(40%) 20 % small farmers
Fishermen + Services + Skilled labor + Transporters (small business)	10-15 Own small boats. Live in boat. Govt:, all dept, Provincial & Federal NGOs, Army, Private. Mason, carpenter, handicrafts, embroidery for their own use, shelter labor, 300 labor in sugar mill, Rikshaws, cart owners, tractors, truck, buses, mini buses, shop owners, auto- mechanics.		1% fishermen 7% services and 8% skilled labour 4% transporters
Land less farmers	Falls in 2 categories, (1) on daily wedges and (2) on share cropping (50%).	Poor	30%
Private Sector	Local business like mill owners, retail and whole sellers, private schools/ institutes, contractors etc.	Rich	4 %
Unskilled labor	Agriculture, cart owners	Very poor	10%
Poultry Farming	Own / rented sheds.	Upper middle	1%

#### 2.4.1.2 Seasonality

The table: 6 below, reflects all major crops are grown in the Canal Irrigated (Pacco zone). The agriculture season for wheat crop remains between November-December to March, while in case of rice it extends from June-July to November. The cotton crops are planted during June and are harvested between October to December. Sugarcane is grown twice a year. One is called spring sowing while the other is called autumn sowing and is harvested in December and February. Vegetables are grown throughout the year. Firewood collection is done from March to November while fodder collection is carried out between September to November.

Table 6: Seasonal activity calendar in Canal Irrigated (Pacco zone)

Activities/Crop	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Agriculture												
Cereal crops cultivation (1)*			Н	Н		Р	Р			Н	H P	Р
Cash crop (2)	Н	Н	P1	P1					P2	P2		Н
Fiber crops (3)						Р				Н	Н	Н
Fruit crop (4)			Р									Н
Vegetables (5)	х	х	х	х	х	Х	х	х	Х	Х	Х	х
Fodder collection									Х	Х	Х	
Non Agriculture												
Firewood collection					х	х	х		х	х	х	

<sup>(1)</sup> Wheat and Rice (2) Sugarcane (3) Cotton (4) Banana (5) sponge gourd, Lady Finger, Onion, Potato, Tomato. P=Planting; H= Harvesting, P1= Spring sowing, P2= Autumn Sowing

## 2.4.2 Zone 2: Riverine (Kacha zone)

#### 2.4.2.1 Livelihood groups, vulnerability and poverty

Being low-lying and close to the Indus River, the Riverine (Kacha zone) is frequently hit by riverine floods during the monsoon season. Heavy rains in the Northern side of the country as well as in Indus catchment augmented the water level in all major rivers and this inundates the low lying areas in the district. There are different livelihood groups in the zone. The largest proportion of the inhabitants is those who are engaged both farming and

livestock rearing. They belong to upper middle class. It is followed by a group which includes sharecroppers (locally called Haaries), unskilled labour and boat owners. They are the most deprived peoples and constitute 36 % of the total population. They have not enough resources to meet their food, clothing and other requirements. Only 5% are those who are big landlords and occupy most of the resources in the zone.

Table 7: Livelihood groups in riverine (Kacha) zone

Livelihood group	Characteristics	Wealth and vulnerability status	Proportion in overall population
Big land lords	500 to 1000 acres in Kacha areas 1000 and above in Canal irrigated (Pacco) areas, Own houses white collar jobs, businesses, Own tube wells for irrigation	Very rich	5%
Small land lords	100 to 400 acres 5-10 buffaloes Own tube wells for irrigation and tractors.	Rich	10%
Farming + livestock	2 to 12 acres agriculture land; 1 to 2 buffalo 4 to 5 kg milk is sold in the city market; Self-produced wheat is sufficient for 8 to 9 months; Kacha houses (Chapper); Own tube wells for irrigation	Upper middle	40%
Haaries (share croppers)+ unskilled labour and Boat owners	They are landless or having very little land (2 to 5 acres); Bricks kiln labor, agriculture work; 1-5 boats owner driver; Floods have destroyed most of the boats and nets have been torn, the fishing community is dependent on fish catching from Manchar lake followed by laboring; HH members = 10-15; Per day fish catch is one mand (40 Kgs) per fisherman, they are borrowers of landlords	Poor	36 % (20% Sharecroppers (Haris) +15 unskilled labour+1% boat owners)
Services	Low grade government service	Lower middle	5%
Small businesses	General stores; Wood cutting, embroidery by women, rope making, rully (embroider quilt) making	Medium	4%

#### 2.4.2.2 Seasonality

The seasonality table describes that only two cereal crops are grown in the Riverine (Kacha zone). The agriculture season for wheat crop remains between November to March, while in case of Jowar it extends from June/July to Sept/Oct. All Vegetables except Onion are

grown in March and April and harvested in May and June. However, Onion nursery is sowing in July and crop is harvested in January. The activity of livestock tending remains throughout the year. However, the livestock marketing becomes highest during September to December. The activity of traditional basket (hedge) making from Sar (a local straw crop produced in lakes and ponds) also remains during September to December. Wheat straw is stored after wheat harvesting and is sold in December at the time of price hike.

**Table 8: Seasonal Calendar for KACHA OR REVERINE AREAS** 

Activities/Crop	Jan	Feb	Mar	Apr	Ma y	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Agriculture												
Cereal crops (1)			Н			Р	Р		Н	Н	S	
Vegetable (2)	Н		Р	Р	Н	Н	Р					
Livestock tending	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х
Non Agriculture												
Animal marketing									Х	Х	Х	Х
Hedge making from Sar									Х	Х	Х	Х
Wheat straw marketing												Х
(1) Wheat and Jowar (2) Lady finger, Sponge gourd, bitter gourd, squash and Onion P=Planting; H= Harvesting												

<sup>2.4.3</sup> Zone 3: Rain fed (Kachho) Zone

#### 2.4.3.1 Livelihood groups, vulnerability and poverty

About 80% inhabitants are small farmers and they practice farming as 50% share cropping along with their own small lands. They fall under the category of poor. Migration of skilled and unskilled labour to Middle East countries has also been observed in the area. They are about 15% of the population and send remittances in the range of 10,000 to 15,000 Pakistani rupees. The remittances are not enough to bring them out of increasing inflation affect. That is why they remain in a lower middle category.

Table 9: Livelihood Groups in Rain Fed (Kachho) Zone

Livelihood group	Characteristics	Wealth and vulnerability status	Proportion in overall population
Landlords	Belong to Rudnani tribe 200-300 acres of land, Keep Haris on share croppers,	Very Rich	5%

Small farmers	Own house , Share croppers 50%	Poor	80%
	5-6 acres self-owned and 5-6 acres on share		
	basis; Extended family 6 families with 35		
	family members live in one compound , Keep		
	livestock on share basis; Keep 1-3 camels, 10-		
	12 goats; Each family consists of 5-6 family		
	members, mostly uneducated; Also involved		
	in rope making; Basic amenities are		
	nonexistent; Polio team visits as per		
	schedule; Canal water is used as the main		
	source of drinking and irrigation; The main		
	sources is located at 50 KMs from the village		
	from Gorak mountain, there is one irrigation		
	canal and one protective bund; There is huge		
	water scarcity from March till July-August;		
	during this period rain water is the only		
	source of irrigation and drinking purposes.		
Migration	Skilled and unskilled labour to UAE, monthly	Lower middle	15%
	remittances 10,000 to 15,000 Pakistani		
	rupees; Total households in the village 100-		
	120 households, each family lives in cluster		
	housing		

#### 2.4.3.2 Seasonality

As per table below, only two cereal crops are grown in the rain-fed (Kachho) Zone. The agriculture season for wheat crop remains between November-December to March, while in case of Rice it extends from May/June to September/October. Number of vegetables including sponge gourd, lady finger, onion, potato and tomato are grown in the zone. The activity of livestock rearing continues throughout the year. However, the activity of livestock marketing becomes highest during September to December. As the majority of the inhabitants are poor and they cannot purchase the wood for household use. Therefore, they collect the fire wood from the forest area. Most of the women are intensively involved in rope making. Rope is made from a wild bush locally called peesh.

Table 10: Seasonal calendar in Rain-fed (Kachho) Zone

Table 10. Seasonal Calendar III Nam-red (Nacimo) 2011e												
Activities/Crop	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Agriculture												
Cereal crops (1)			Н			Р	Р		Н	Н	Р	Р
Vegetables (2)	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х
Fodder collection								Х	Х	Х	Х	
Livestock rearing	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х
Non Agriculture												
Firewood collection	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х
Water collection from ponds	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х

Animal marketing									Х	Х	Х	Х
Out migration labour	Х	Х						Χ	Х	Х	Х	Х
Rope making	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х

(1) Wheat and Rice (2) Sponge Gourd, Lady Finger, Onion, Potato, Tomato. P=Planting; H= Harvesting



## **Section 3:**

# Responding To Disasters: Communities and External Assistance Needs

As described earlier, the district of Dadu is prone to various types of hazards. The floods and drought are the most important historically causing widespread damage.

## 3.1 Community coping mechanisms

The responses to these different types of hazards can be differentiated by the degree to which local communities and households are able to reduce the risk of the hazard turning into a disaster- either by preventing or reducing the effects of the hazard, and/or effectively dealing with the consequences. To deal with the impact of regularly occurring hazards, communities and households have developed a number of coping mechanisms. To some extent the communities have built their resilience to various disasters and different magnitudes through their folk wisdom and time long practices, but when the catastrophe increases they are quite vulnerable and need a supporting hand.

The following coping mechanisms are employed to deal with the hazards of floods, heavy rainfall and drought.

Table 11: Coping Mechanisms For Different Hazards

Hazard	Coping mechanism/Issues (behavioral change)	Risk Reduction Measures / Recommendations
Floods	Shifting to safer / elevated places. The residents collected Rs1.5 million to build a ring-embankment and saved the town. Heavy de-watering machines were provided for de-watering of flood water from K.N Shah town and surrounding area. Boats were rented for certain period of time from nearby fishermen community @ 500-600 per day. Seek refuge in govt buildings on temporary basis. Shift to bunds and road and open spaces wherever available. Storage of wheat seed and ration for emergencies	Hamal lake was lifted by one foot to allow the water to discharge in the MNV drain and release the pressure on the lake Round the clock patrolling on bunds for timely plugging and resist any sabotage activity. The residents of the town raised the ring-dyke by 18 feet by dumping bags of mud. Construct raised houses Promote engagement of communities with District Disaster Management Authority and other stakeholder for improved disaster preparedness. Provision of agriculture seed, fertilizers, agricultural equipment, animal vaccination, boats for evacuation, life jackets and regular training to community members. As per the announcement of MPA the govt community center should be established. Provision of soft loans for installation of tube wells for irrigation and drinking purposes.

Drought	Digging of wells at frequent intervals,	Prepare and implement district drought
Diougiit	Migration to barrage areas.	management and risk reduction plans and
	During drought migration to Pacco and	mobilize support for their implementation
	Kachha areas, migrate to Karachi,	through public private partnership
	_	Enhance coordination with National
	Hyderabad as seasonal agriculture	
	laborus.	organizations/institutions and support
		systems in dealing with land degradation,
		desertification and drought and also
		strengthening coordination among them
	Stay there 2-3 months until drought	Strengthen human resource and institutional
	ends, live along Hamal canal, it takes 2-3	capacity of Small farmers Enhance capacity-
	hours to fetch water for household	building and technology transfer by
	consumption,	establishing farmer field schools with special
	Animals are sold; camel is used for travel	reference to drought
	and transportation, fetching water, no	Promote the development and
	thrashing machine, no carts, just camels.	implementation of effective drought
	It is also used for daily migration.	information, forecasting and early warning
		systems to disseminate reliable and timely
		information to communities living in drought-
		prone areas to enable them to take
		appropriate and proactive measures
		Construction of water storage facilities such
		as water reservoirs, Rainwater Harvesting
		structures such as mini dams and water
		ponds, desert strip farming, micro catchment
		farming and runoff/run-on systems
		Promote the development of drought-tolerant
		seed varieties and ensuring their easy access
		to farmers in drought prone areas
Deforestation	Progress in increasing forest area has	Initiation of community based social forestry
	been limited due to financial and social	programs with attractive incentives in the
	constraints as well as behavioral	form of subsidized supply of planting stock,
	limitations.	partial payment of planting cost, free
		protection of planted areas for a limited
		period of time and fair return to the farmers
		Policy reforms on forest ownership patterns
		(pro-community forest ownership policies)
		The tree plantation on Kacha/Pacco
		road/canal path and in Government offices,
		health/education institutions etc
Water and	Lack of education and information /	Enhance access to social services to the
Sanitation	rights. No mitigation measures are yet	communities (drinking water and sanitation
	taken	Proper planning, designing and construction
		of water supply schemes, sanitation/drainage
		schemes by PHED and Rural Development
		Community involvement in rural water supply,
		sanitation program through community based
		organizations at all stages
		Provide sewerage & drainage disposal
		facilities both in urban and rural setups.
		Treatment of sewage in oxidation ponds or in
		the digesting chambers before disposing off
		into flowing canals

## 3.2 Type, timing, quantities and costs of material support for exceptional events

When very large scale hazards hit the district, risk reduction measures and community coping strategies are often insufficient to avert large scale damage to lives and livelihoods (although they may be able to reduce the severity of impact). In these situations, external support from the government and other external actors is required. These actors include local and international NGOs, UN agencies, international aid donors, the private sector and philanthropist private individuals and foundations.

In order to facilitate these responses, livelihood based contingency plans have been developed for the various types of exceptional hazards that may occur in the district. A number of steps have been taken to ensure that these plans are constructed on the basis of plausible assumptions and, crucially, that they are understood and endorsed by local government and NGOs operating in the district.

#### The **technical steps** to achieve this are as follows:

- A. Hazard impact calendar has been constructed for each hazard. This shows when the hazard strikes in relation to the livelihood activities taking place at the time. From this, it is possible to pick out appropriate type and timing of response activities to support livelihoods.
- B. This information is then "mapped" onto the demographic information contained in table 4 above, and is adjusted according to an estimate of likely vulnerability of the population subject to the hazard using information contained in the wealth / livelihood categorization tables. This is done as for a given severity of event, whilst many people will be affected, those with less assets and incomes will be in greater need of assistance.
- C. The amount and cost of material assistance likely to be necessary to restore livelihoods is then calculated in a spreadsheet using current prices (this can be updated as necessary), and an estimate of overall quantities and costs is given. This then serves as a hazard contingency plan for the district and can inform budgetary allocations and / or stockpiling decisions and also can guide initial planning and budgeting estimates after a hazard has struck.

The following sections thus represent the output of a transparent and technically sound process of consultation with key stakeholders in the district. These sections provide livelihood-based contingency plans for floods in Kacha as well as Pacco areas, torrential floods in Kachho and drought in Kacho.

# 3.3 Response Strategies For Various Hazards

# 3.3.1 Response to floods in Riverine (Kacha) as well as Canal irrigated (Pacco) areas of district Dadu

#### 3.3.1.1 Assisting communities after floods.

In order to respond more effectively in the short term to the impact of flooding on the communities a number of interventions are required. The response strategy consists of a number of different kinds of interventions, which should be implemented in sequence and targeted. The interventions encompass relief activities as well as early recovery and rehabilitation. The key focus is on restoring livelihoods. Below table have the details.

Table 12: Response strategy sequencing for flood in Kacha areas in District Dadu

rable 12: Response sera	<u> </u>											
Response Strategies	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
Rescue and shelter     (tent, latrine and     hygiene)	х	Х										
2. Food support	Х	Х										
3. Kitchen Kits		Х										
4. Cash for distress loans		Х										
5. Support for repairing houses		X	х									
6. Support for livestock nutrition (feed)		X	X									
7. Veterinary support for livestock care		X	X									
8. Wheat seed and fertilizer (All district)					X	X						
9. Support for winter vegetable seed (Package for kitchen gardening)				X								
10. Support for restocking small ruminant (goats)			Х	Х					-			
11. Poultry restocking				Χ								

# 3.3.1.2 Sequence of response interventions to farming livelihood after floods

(Based on seasonal calendar analysis)

- a) Rescue/boats as soon as possible at time of/after floods.
- b) Food relief as soon as possible at time of/after floods for minimum of one month.
- c) Kitchen utensils
- d) Distress cash grant
- e) Support for repairing of houses- preferably cash, but also material, where suitable and acceptable

- f) Support for livestock nutrition (feed) immediately after floods.
- g) Support for livestock for veterinary care immediately after floods.
- h) Wheat seed and fertilizer for the onset of the winter planting season.
- i) Seed for winter vegetables.
- j) Support of restocking of small ruminants.
- k) Poultry restocking.

Table 13: Livelihood based contingency plan for floods (riverine) in high risk UCs in district Dadu.

Dadu.			Proportion of	Packag	Total	
Type of response	At Risk area	At Risk HH	HH in need of support (%)	e per HH	amount (PKR)	Responsibilities
Rescue and Shelter	6 High risk UCs (1.Mangwani,2	31182	100	1,603	50,000,000	District Government/ NGOs
Food support for a month (100% HH)	sk UCs wani,2.	31182	100	5,292	165,000,000	WFP/NGOs/ Food Dept.
Kitchen Utensils (30% of HH)	Khan J	9354	30	1,283	12,000,000	INGOs
Cash Grant (equivalent. to one month wage)	lo Goth, 3.	9354	30	5,345	50,000,000	District Government/ NGOs
Support for repairing of 50% HH	. Faridabac	15591	50	10,647	166,000,000	UN Habitat Government/ NGOs.
Support of livestock nutrition (feed) (50% HH)	6 High risk UCs (1.Mangwani,2. Khan Jo Goth, 3.Faridabad, 4.Siyal, 5.Pat, 6.Monder)	15591	50	1,539	24,000,000	Livestock Dept./FAO/ NGOs/Bilateral Donors
Veterinary Support for livestock care.(5 animals/HH)	at, 6.Mon	15591	50	1,090	17,000,000	do
Wheat seed support (Affected HH in rural areas in all zones for 2 acres/HH.(50% HH)	der)	15591	50	3,784	59,000,000	Agriculture Dept./FAO/ INGOs
Fertilizer support (Urea)		15591	50	6,927	108,000,000	do
Fertilizer support (DAP)		15591	50	6,927	108,000,000	do
Support for winter vegetables seeds (Package for Kitchen Gardening)		15591	50	1,603	25,000,000	do
Restocking of small ruminants (3 goats/HH)(50% HH)		15591	50	12,828	200,000,000	Livestock Dept./FAO/NGO s
Restocking of poultry plus feed package (6 chicken/HH)		15591	50	2,181	34,000,000	Livestock Dept./FAO/NGO s

Table 14: Livelihood based contingency plan for floods (riverine) in medium risk UCs in district Dadu.

district Dadu.						
Type of response	At Risk area	At Risk HH	Proportio n of HH in need of support (%)	Package per HH	Total amount (PKR)	Responsibilities
Rescue and Shelter	9 medium ris District Dadu	44,838	100	1,603	71,897,248	District Government/NGOs
Food support for a month	9 medium risk Ucs of District Dadu	44,838	100	5,292	237,260,920	WFP/NGOs/Food Dept.
Kitchen Utensils (30% of HH)	Jcs of	13,451.4	30	1,283	17,256,446	INGOs
Cash Grant (equivalent to one month wage)	Nao Got Pipri.	13,451	30	5,345	71,899,722	District Government/NGOs
Support for repairing of houses	h, Shah P	22,419	50	10,647	238,698,865	UN Habitat Government/NGOs
Support of livestock nutrition (feed)	anjo, Kaz	22,419	50	1,539	34,510,679	Livestock Dept. FAO/NGOs
Veterinary Support for livestock care.(5 animals/HH)	Nao Goth, Shah Panjo, Kazi Arif,Bali Shah, AllahAbad, KhudaAbad, Pipri.	22,419	50	1,090	24,445,064	do
Wheat seed support for 2 acres/HH.	ah, Allah,	22,419	50	3,784	84,838,753	Agriculture Dept./FAO/INGOs
Fertilizer support (Urea)	الملامل الم	22,419	50	6,927	155,298,057	do
Fertilizer support (DAP)	(hudaA	22,419	50	6,927	155,298,057	do
Support for winter vegetables seeds (Package for Kitchen Gardening )	.bad, Phulji station, Piaro Station,	22,419	50	1,603	35,948,624	do
Restocking of small ruminants (3 goats/HH)	ion, Piarc	22,419	50	12,828	287,588,994	Livestock Dept./FAO/ NGOs
Restocking of poultry plus feed package (6 chicken/HH)	Station,	22,419	50	2,181	48,890,129	Livestock Dept./FAO/ NGOs

#### 3.3.2 Response to Torrential Flooding in Rain fed (Kachho) Zone Belt.

As per geographical zonation of the area, the rain fed (Kachho) Zone of Dadu district is widely affected by torrential flooding due to rainfall in mountainous area. The rainwater

passing through "Nai Gaj" (natural waterways) inundate hundreds of thousands hectares of barani lands as well as settlements. The water flowing down from mountains with huge speed along with tons of gravels and heavy rocks flushed away anything in its passage way within seconds. The Floods of 2010 also inundate the large area under water for several months. Timely response interventions are needed to support them in provision of food, shelter and distress grants to skilled and unskilled laborers to restarts their livelihood income sources.

Table 15: Response strategy sequencing for Torrential Flood in RAIN-FED (Kachho) Zone areas in District Dadu

Response Strategies	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
1. Rescue	Х	Х										
2. Food support	Х	х										
3. Cash for distress loans		Х										
4. Pumping out of flood water		Х										
5. Support for repairing houses			Х	X								
6. Revival of livelihoods of skilled labour.			х	x								
7. Veterinary support to buffaloes/cows in suburb areas		x	x	Х								

#### 3.3.2.1 Sequence of response interventions to farming livelihood after floods

- a) Rescue/boats as soon as possible at time of/after floods.
- b) Food relief as soon as possible at time of/after floods for minimum of one month.
- c) Distress cash grant.
- d) Pumping out of flood water.
- e) Support for repairing of houses- preferably cash, but also material, where suitable and acceptable.
- f) Revival of livelihoods of skilled labour.
- g) Veterinary support to buffaloes/cows in suburb areas.

Table 16: Livelihood based contingency plan for torrential floods in Rain-fed (Kachho)

Zone of district Dadu

	n district Dat					
Type of response	Affected area	Affected HH	Proportion of HH in need of support (%)	Package per HH	Total amount (PKR)	Responsibilities
Rescue and Shelter	11 High risk UCs	55627		1,600	89,000,000	District Government/NG Os
Food support for a month (100% HH)	1.E 5 K	55627	100	5,393	300,000,000	WFP/NGOs/Food Dept.
Distress Cash Grant (equivalent to one month wage)(30% of HH)	1.Burira, 2.Gozo. 3.Kandechukhi, 4.Mitho Baba 5.Kakar, 6. Bahawal pur,7.Drigh bala, 8.Kama Khan,9.Phulji. 10.Tando Rahim Khan. 11.Johi	16688	30	5,333	89,000,000	District Government/NG Os
Support for pumping out of water. (All flood areas)	iozo. 3.Kandechukhi, Bahawal pur,7.Drigh Jiji. 10.Tando Rahim	55627	100	5,393	300,000,000	Works department/NG Os
Support for repairing of 50% HH	3.Kandechukhi, awal pur,7.Drigh O.Tando Rahim k	27813	50	10,643	296,000,000	UN Habitat Government/ NGOs.
Revival of skilled labor (10% HH)	4.Mitho Babar, bala, 8.Kamal Khan. 11.Johi.	5562	10	10,787	60,000,000	ILO/Distt. Govt./INGOs.
Veterinary support of livestock diseases IO animal / HH. (20 % of suburb areas )	ho Babar, 8.Kamal 11.Johi.	11125	20	2,157	24,000,000	Livestock Dept./FAO/NGOs /Bilateral Donors

Table 17: Livelihood based contingency plan for torrential floods in Rain-fed (Kachho) Zone of district Dadu

Type of response	Affected area	Affected HH	Proportion of HH in need of support (%)	Packag e per HH	Total amount (PKR)	Responsibilities
Rescue and Shelter	6 medium	20299	100	1,600	32,477,232	District Government /NGOs
Food support for a month	affected Ucs	20299	100	5,393	109,473,817	WFP/NGOs Food Dept.
Distress Cash Grant (eqvi. to one month wage)	Chhore Qamber, Thalo,	6089.7	30	5,333	32,477,427	District Government NGOs
Support for pumping out of water. (All flood areas)	Kandechukhi, Pat Gul Mohammad,	20299	100	5,393	109,473,817	Works department NGOs
Support for repairing of Houses	Chhini, Tore.	10149.5	50	10,643	108,016,108	UN Habitat Government NGOs.

Revival of skilled labor (10% HH)	2029.9	10	10,787	21,897,519	ILO/Distt. Govt./INGOs.
Veterinary support of livestock diseases IO animal / HH.	4059.8	20	2,157	8,758,220	Livestock Dept./FAO/NG Os/Bilateral Donors

#### 3.3.3 Response strategy to drought in Rain fed (Kachho) Zone of district Dadu

The prolonged drought occurrence in Rain fed (Kachho) Zone region of Dadu is a serious issue. The drought directly affects people socially and economically. The region also experiences continued hardships in terms of basic facilities such as infrastructure, health, education, drinking water etc. due to its remote location. The subsoil water is brackish therefore, women walk long distances to fetch water from temporary wells and ponds. The following table shows the sequencing of responses to reduce the impact of drought on communities in the Rain-fed (Kachho) Zone of the district. Seven basic interventions are recommended to meet with immediate demand of peoples, livestock and crops.

Table 18: Response strategy sequencing for drought in Rain Fed (Kachho) Zone of District Dadu

Response Strategies	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
1. Food support			Х	Х	Х							
2. Cash grant			X									
3. Supplementary feed for small ruminants.			Х	Х	х							
4. Supplementary feed for cattle. (One cow/HH;5kg/cow for 3 months to 50% HH)			х	х	х							
5. Veterinary support for livestock diseases			х	х	х							
6. Wheat seed and fertilizer (For RAIN- FED (Kachho) Zone only)					х	х						
7. Restocking of small ruminant			Х	Х								

# 3.3.3.1 Sequence of response interventions to the farming community of Rain-fed (Kachho) Zone after drought.

(Based on seasonal calendar analysis)

- a) Food support.
- b) Distress cash grant.
- c) Supplementary feed for small ruminants.
- d) Supplementary feed for cattle. (One cow/HH; 5kg/cow for 3 months to 50% HH)
- e) Veterinary support for livestock diseases.
- f) Wheat seed and fertilizer (For rain-fed (Kachho) Zone only).
- g) Restocking of small ruminant.

Table 19: Livelihood based contingency plan for High Risk UCs of drought in district Dadu

Type of response	At Risk area	At Risk HHs	Proportion of HH in need of support (%)	Package per HH	Total amount (PKR)	Responsibilities
1. Food support for three month (80% HH)	4 High risk UCs	11220	80	16,043	180,000,000	WFP/NGOs/Food Dept.
2. Distress Cash Grant (equivalent to one month wage; 40% of HH).	1. Chorre	5610	40	5,348	30,000,000	Labor Dept./ILO/INGOs
3. Supplementary feed for small ruminants. 6 goats/HH; 0.5 kg/goat for 3 months.	e Qambe	11220	80	9,626	108,000,000	Livestock Dept/FAO/NGOS
4. Supplementary feed for cattle. (One cow/HH;5kg/cow for 3 months)	Qamber 2. Tore	7013	50	9,696	68,000,000	Livestock Dept/FAO/NGOS
5. Veterinary support for livestock diseases (3 goats/HH. O.5 kg/goat for 3 months to 80% HH.	3. Pat Gul Muhammad 4. CHHini	11220	80	3,209	36,000,000	Livestock Dept/FAO/NGOS
6. Wheat seed for 2 acres for 50% HH.	uhammad	7013	50	3,850	27,000,000	Agriculture Dept./ FAO/INGOs
7. Fertilizer support (Urea) For 2 acres.	4. CHHir	7013	50	6,987	49,000,000	Agriculture Dept./ FAO/INGOs
8. Fertilizer support (DAP). For 2 acres	] ]	7013	50	6,987	49,000,000	Agriculture Dept./ FAO/INGOs
9. Restocking of small ruminant. 1 goat per HH for 50% HH.		7013	50	6,987	49,000,000	Livestock Dept/FAO/NGOS

Table 20: Livelihood based contingency plan for drought affected (medium) in district Dadu

Type of response  1. Food support for three	At Risk area	At Risk HHs	Proportion of HH in need of support (%)	Package per HH.	Total amount (PKR)  343,135,829	Responsibilities Food
month (80% HH)	medium affected Ucs					department, PDMA, NGOs, WFP.
2. Distress Cash Grant (equivalent to one month wage).		10694	40	5348	57,189,305	Labor Dept. ILO/INGOs
3. Supplementary feed for small ruminants. 6 goats/HH 0.5 kg/goat for 3 months	Bahawal Pu	21389	80	9626	205,881,497	Livestock Dept/FAO/ NGOS
4. Supplementary feed for cattle. (One cow/HH 5kg/cow for 3 months)	Bahawal Pur, Kamal Khan, Phulji, Tando Rahim khan, Johi, Drigh	13368	50	9696	129,619,849	Livestock Dept/FAO/ NGOS
5. Veterinary support for livestock diseases (3 goats /HH. O.5 kg/goat for 3 months.		21389	80	3209	68,627,166	Livestock Dept/FAO/ NGOS
6. Wheat seed for 2 acres for 50% HH.	ando Rahi	13368	50	3850	51,466,705	Agriculture Dept FAO/INGOs
7. Fertilizer support (Urea) For 2 acres.	im khan, Jo	13368	50	6987	93,402,538	Agriculture Dept FAO/INGOs
8. Fertilizer support (DAP). For 2 acres	ohi, Drigh	13368	50	6987	93,402,538	Agriculture Dept FAO/INGOs
9. Restocking of small ruminant. 1 goat per HH	Bala	13368	50	5000	66,840,000	Livestock Dept/FAO/NGO S

# **Section 4:**

# **Gender and Vulnerable Groups in Disasters:**

Mainstreaming gender and other vulnerable groups such as elderly, children, sick and people with disabilities in disaster preparedness, planning and response has been realized by governments and many agencies as integral part of disaster plans. Studies show that these groups have been completely ignored in the past and have disproportionately affected by disasters, including increased loss of livelihoods, gender-based violence, and even loss of life during, and in the aftermath of, disasters. Hence it has become critical to include the vulnerable groups in all phases of disaster planning enabling government and other stakeholders to consider their needs and plan accordingly and enable these vulnerable groups to prepare, confront and recover the tragic situations.

Realizing the need and importance of the vulnerable groups in disaster, National Disaster Management Authority's (NDMA) Gender and Child Cell (GCC) has successfully developed and launched "Pakistan's National Policy Guidelines on Vulnerable Groups in Disasters". The vision is of this policy is to:

"To ensure that the needs and concerns of the vulnerable groups (Gender, Children, Aged

And Disabled) are addressed in all phases and in all type of disasters".

SPO with the support of UN Women prepared Disaster Management Plans of 60 sample villages in the Dadu district. These plans purely focus on the challenges, importance and need of equally involving all vulnerable groups in the selected communities. It is expected that the through these plans the community will be prepared for the disaster knowing their strengths and will able to act quickly to respond the disaster which will not only save their lives or minimize the life loss but also minimize the loss of their assets such as personal belongings, crops, livestock, etc. The plans contains important information of the village such as location, total population – segregated gender wise, age groups, children and disabled. The sample 60 villages will be linked with the local DDMA. The list of these villages is attached is Annexure 08.

# **Section 5:**

# District Disaster Management Authority (DDMA), its structures and roles and responsibilities of key stakeholders

# 5.1 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 Disaster Risk Management. Accordingly, major components of DRM will be prioritized such as early warning systems, preparedness, humanitarian response and mitigation. At the same time, all the departments coordinated through DDMA will strictly adhere to the following policy rules.

- Clarity of DDMA, its vision, mission and objectives along with orientation and assignment of responsibilities and duties to the concerned department by chairman.
- Professional and moral commitment to perform the tasks specified in contingency plan by all the line agencies in district Dadu.
- 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 stages.
- Monitoring the situation persistently to ensure all the management arrangements timely, appropriate and culture sensitive.

# 5.2 Composition Of District Disaster Management Authority (DDMA)

a)	Deputy Commissioner	Chairman
b)	ADC I & II	Member
c)	Superintendent of Police	Member
d)	DHO	Member

e) AD – SW Member f) Rep. of Civil Society Member

g) DO, Civil Defense Member/Secretary

# **5.3** Powers and functions of District Authority:

- 1. Subject to the provisions of the Ordinance, the District Authority shall be the district Planning, Coordinating and Implementing body for disaster management and take all measures for the purposes of disaster management in the district in accordance with the guidelines laid down by the National Authority and the Provincial Authority.
- 2. Without prejudice to the generality of the foregoing provisions, the District Authority may:
- a. Prepare a disaster management plan including district response plan for the district
- b. Coordinate and monitor the implementation of the national policy, provincial policy, national plan, provincial plan and district plan;
- c. Ensure that the areas in the district vulnerable to disasters are identified and measures for the prevention of disasters and the mitigation of its effects are undertaken by the departments of the government at the district level as well as by the local authorities;
- d. Ensure that the guidelines for prevention, mitigation, preparedness and response measures as laid down by the national authority and the provincial authority are followed by all departments of the government at the district level and the local authorities in the district;
- Give directions to different authorities at the district level and local authorities to take such other measures for the prevention or mitigation of disasters as may be necessary;
- f. Lay down guidelines for preparation of disaster management plans by the departments of the government at the districts level and local authorities in the district;
- g. Monitor the implementation of disaster management plans prepared by the departments of the government at the district level;
- h. Lay down guidelines to be followed by the departments of the government at the district level;
- i. Organize and coordinate specialized training programmes for different levels of officers, employees and voluntary rescue workers in the district;
- Facilitate community training and awareness programmes for prevention of disaster or mitigation with the support of local authorities, governmental and non-governmental organizations;
- k. Set up, maintain, review and upgrade the mechanism for early warnings and dissemination of proper information to public;
- I. Prepare, review and update district level response plan and guidelines;
- m. Coordinate with, and give guidelines to, local authorities in the district to ensure that pre-disaster and post-disaster management activities in the district are carried out promptly and effectively;
- Review development plans prepared by the departments of the government at the district level, statutory authorities or local authorities with a view to make necessary provisions therein for prevention of disaster or mitigation;

- Identify buildings and places which could, in the event of disaster situation be used as relief centers or camps and make arrangements for water supply and sanitation in such buildings or places;
- p. Establish stockpiles of relief and rescue materials or ensure preparedness to make such materials available at a short notice;
- q. Provide information to the provincial authority relating to different aspects of disaster management;
- r. Encourage the involvement of non-governmental organizations and voluntary social-welfare institutions working at the grassroots level in the district for disaster management;
- s. Ensure communication systems are in order, and disaster management drills are carried out periodically; and
- t. Perform such other functions as the provincial government or provincial authority may assign to it or as it deems necessary for disaster management in the district

# 5.4 Role And Responsibilities Of Different Departments

#### 5.4.1 Revenue Department

- Hold coordination meetings with all ACs Revenue for situation analysis of the affected areas and population.
- Develop coordination mechanism and communication protocols.
- Arrange and conduct need assessments of damages / losses.
- Ensure application of proper mechanism for evacuation and relocation of affected community to safer places.
- Establish Relief Camps with necessary arrangements.
- Initiate relief and rescue activities in their respective areas with the help of all stakeholders which also include provision of shelter, food, medicines etc. to the affected communities as well as to IDPs who are settled in makeshift Relief camps.

#### 5.4.2 Irrigation Department

- Develop coordination mechanism with PMD for ascertaining flood discharge.
- Develop mechanism for regulation of water discharge into canals, distributaries and drains before onset of monsoon season.
- Develop monitoring mechanism for inspection of embankments, weak parts of drains, IPs (inspection parts) and NIPs (non inspection parts) of all irrigation channels.
- Delegate responsibilities for regular inspection and maintenance of irrigation channels and drains.
- Coordinate and communicate with DDMA.

- Identify and strengthen the vulnerable points in the banks of all canals and drains running through the district.
- Vigilance of canals / drains round the clock.
- Closure of canals at the heads as soon as possible in case of any breach or heavy downpour, etc.
- Ensure smooth flow of water, plugging up of breaches, if any, in the shortest possible time.
- Prompt dewatering of stagnant water from affected and low lying areas of the district.

#### 5.4.3 **HESCO**

- The Executive Engineers, HESCO Division shall ensure uninterrupted supply of electricity particularly to municipal services such as pumping stations for draining out rain water from the low lying and slum areas.
- Shall make arrangements for immediate removal/repair of fallen live wires to avoid any untoward incident of electrocution.

#### 5.4.4 **Health Department**

- Arrange coordination meetings with health units.
- Mobilize entire health network functioning in the district for situation analysis and need assessments.
- Arrange mobile teams / Mobile Medicine Units for pre-medication of affected communities in all near and remote areas.
- Provide necessary medical facilities at relief camps.
- Close coordination and communication with DDMA.
- Depending on the calamity, the D.H.O will declare emergency at all medical points/health facilities.
- Detail of medical/paramedical staff at all points requiring medical health cover during any disaster.
- Arrange and provide adequate stock of medicines and medical supplies including Anti-Snake Venoms (ASVs) and Anti-Rabbi Venoms (ARVs), blood plasma, Saline Water, and other medical fluids for victims.
- Arrange medical teams for providing medical cover to the IDPs settled in any relief camp.
- Fumigate the affected areas and areas at risks of spread of any of epidemic disease.
- Ensure that all ambulances are in working order and road worthy conditions.

• The DSM, PPHI shall also be responsible for providing medical cover to the IDPs in the catchment area of BHUs assigned to them particularly, and will perform their due role in supplementing the overall medical cover provided by the District Health Department.

#### 5.4.5 Education Department

- Ensure vacant possession of all schools buildings at the time of emergency for setting up relief camps.
- Ensure sanitation and cleanliness as well as clean drinking water facilities wherever possible at all school buildings declared as relief camps through by binding down their concerned Headmasters.
- Ensure to standby all their manpower which will help the revenue functionaries during the disaster in and around their places of postings to smoothly conduct/carry out relief and rehabilitation activities.

#### 5.4.6 Municipal/Town Committees Of Local Government

- All Municipal officers of Municipal Committees and TMAs and Secretaries of 52 U.Cs of the district shall be responsible for ensuring general cleanliness, sanitation and supply of clean drinking water in their respective areas.
- Ensure excavation and cleaning of all sewerage drains through special teams to be formed for this purpose well before the Monsoon.
- Responsible for smooth flow of sewerage disposal pumps/machines and providing uninterrupted all municipal services to the community.
- Prepare inventory of machines and tools available with them and share with DDMC.
- Ensure that all machines/tools, particularly dewatering machines, are in working order.
- Ensure availability of generators and other equipment at their respective pumping stations.
- Ensure fire-fighting equipment are in order and adequate staff is available roundthe-clock to combat any eventuality.
- Closely coordinate with control rooms established at each Taluka, carry out fumigation in their respective areas in coordination with Health Department.
- Responsible for prompt dewatering of stagnant water in their respective areas when there is flood related disaster.
- Responsible for taking all precautionary measures/steps particularly in low-lying areas.

- The Administrators of TMAs shall also be responsible for immediate removal and disposal of decay, flesh and remains of dead animals from residential areas and road sides.
- The ADLG, and Secretaries of all UCs in the district shall ensure installation of maximum number of hand pumps in the area where underground sweet water is available

#### 5.4.7 Livestock & Animals Husbandry Department

- Responsible for taking all preventive measures with regard to spreading of any epidemic disease.
- Responsible for vaccination and provision of full medical cover through mobile teams in case of any such outbreak.
- Arrange and ensure availability of adequate medicines and fodder for animals.

#### 5.4.8 **Police**

- Disseminate early warnings received by DDMA to vulnerable areas through police station and posts or any other available means.
- Make logistical arrangements for evacuation and supply of relief work with coordination of DDMA and Revenue Department.
- Manage necessary security arrangements for relief camps and affected areas.
- Coordinate and communicate with DDMA.
- Over all responsible for security cover during service and relief operation in the District along with extending full help / assistance in rescue operation.

#### 5.4.9 Works & Services Department

- Coordinate with all SDOs for situational reporting about length of damage of community infrastructures and services.
- Immediately respond any requests / need for the maintenance of communication means enabling effective response delivery to the affected people.
- Develop coordination mechanism with DDMA.
- Support DDMA for development of rehabilitation proposals for the development of affected people and areas.
- Ensure all roads in the district are motor able and open for vehicular traffic.
- Ensure immediate repair/restoration of roads damaged in any disastrous situation.

• The Executive Engineer, Buildings shall ensure uninterrupted supply of water to the offices of the district as well as taluka administration/DDMA including DHQ Hospital and other such facilities.

#### 5.4.10 Social Welfare Department

• Immediately prepare a list of active NGOs working in the district and coordinate with them to utilize their services, manpower and resources during any emergency situation.

#### **5.4.11** Telecommunication Department

• The Divisional Engineer Telephones shall ensure continuity of telephone facility/service without any interruption/disturbance, especially to government offices and departments given the task of emergency and relief work.

#### **5.4.12** Agriculture Department

- Conduct assessment/s of crops, livestock, fisheries, forest and soil losses.
- Share major findings and recommendations with DDMA for immediate response.
- Establish veterinary centers for necessary services such as vaccination and deworming of livestock and animal feeding.
- Develop actions plans for reclamation and rehabilitation of degraded lands.

#### **5.4.13 Food Department**

- Ensure adequate availability of food stocks in disaster situation at the strategically points.
- Organize ration depots at locations required by the Disaster Managers.
- Ensure protection of storage warehouses from floods and form the law-breakers.

#### **5.4.14 Pakistan Metrological Department**

- Regularly collect metrological and climatological data.
- Prepare and disseminate daily weather forecast report.
- Timely share the information such as weather updates, warnings, etc. with DDMA and other concerned departments.

# **Section 6:**

# Plan of Action and SOPs

The primary objective of this plan is to save lives, prevent needless sufferings, protect vital infrastructures / installations, livestock, private and public property from damage and destruction caused by the natural calamities. Under this plan, the District Disaster Management Committee aims to provide clear directions and guidelines to all the key stakeholders of the district. The District Disaster Risk Management Plan is intended to be used by all departments and stakeholders whose roles have been defined in the plan all levels of the district.

# 6.1 District Disaster Contingency Plan

In the light of past experience, a comprehensive disaster contingency plan has been prepared wherein role of all stakeholders/departments has been specifically spelled out, in order to combat natural or man-made calamities such as flash floods, earthquake, drought, fire, bomb-blast etc., so as to establish chain of command and have effective coordination amongst all stakeholders. This plan comprises a District Disaster Management Committee headed by the Deputy Commissioner as Chairman and Senior Superintendent of Police, District Health Officer, District Education Officer, Superintending Engineer, Works & Services, Additional Director Agriculture, Executive Engineer HESCO, D.E Telephone, ADLG, Area Manager S.S.G.C.L, Deputy Director Animal Husbandry, Executive Engineer Drainage Division and Deputy Director Social Welfare, Executive Engineer, PHED, all Executive Engineers of Irrigation Department concerned within district as members. The District Disaster Management Officer (D.D.M.O) to be appointed by the PDMA will act as its Secretary. Likewise, the D.D.M.C will be assisted by the similar committees at Taluka-level headed by respective Assistant Commissioners and will consist of the representatives of all concerned departments in Taluka. The respective Mukhtiarkar will act as its Secretary. The DDMA can co-opt any NGO or philanthropist etc., as members with a view to ensure better participation and facilitation of its task in public interest.

# 6.2 Aims And Objectives

The District Disaster Contingency Plan is aimed at preventing and mitigating the impact of any natural or man-made calamity. It would ensure effective and integrated/coordinated action of all agencies responsible for combating the same. The District Disaster Management Authority would be responsible for:

- By disseminating and forewarning about any calamity in the district.
- By intimating the P.D.M.A/ N.D.M.A and other agencies about the calamity. Ensuring further of floating reference to Relief Department, Government of Sindh for declaring the whole district or its part as the case may be as "calamity affected".
- By initiating rescue operation/evacuation of inhabitants from the affected and marooned areas.
- By taking relief measures including identification/establishment/management of relief camps through Taluka committees to ensure that each and every relief camp is headed by village elder. In case of relief camps established in designated place, the Mukhtiarkar or Assistant Mukhtiarkar will be the in-charge of that camp in order to facilitate transparent and prompt provision of relief goods.
- By providing food, non-food items, ensuring health cover to the affected people, taking
  efforts for provision of fodder to livestock by caring their health needs, providing clean
  drinking water and ensuring fumigation of the affected area to prevent outbreak of any
  disease.
- By ensuring early recovery/rehabilitation of the affected people including other remedial measures.

#### 6.3 Control Room

The Chairman/Secretary, DDMA shall establish a control room at District Headquarters, where representatives of Revenue, Police, HESCO, Telephone, Health, Education, Animal Husbandry, Agriculture Extension, Municipal Administration, Social Welfare, Works & Services, SIDA/Irrigation and XEN Drainage Division and Public Health Engineering Department shall ensure their presence. This control room will function round-the-clock under the direct supervision of the Chairman/Deputy Commissioner. ADC-II would be the Focal Person in this regard. The Control Room would also act as **DEOC** (District Emergency Operation Centre) as desired by PDMA. Likewise, Taluka control rooms shall be established at each Taluka Headquarter, which shall also function round-the-clock under the direct supervision of the concerned Assistant Commissioner. All the representatives available at aforesaid control room shall be responsible for receiving complaints, monitoring the ground situation and dissemination of information to the relevant agencies/departments and to their concerned departments. They will also keep the Chairman/Secretary of DDMA abreast of the latest/current situation.

# **6.4 Activation Of Emergency Committees**

In case of the disaster, following emergency committees will be activated immediately:

#### 6.4.1 Vigilance, Protection & Rescue Committee

#### 6.4.1.1 Members:

- a) MNAs & MPAs
- b) Deputy Commissioner
- c) Senior Superintendent of Police SSP
- d) Army Representative)
- e) Navy (Representative)
- f) Assistant Director LG
- g) District Information Officer
- h) PTCL (Representative)
- i) WAPDA/SEPCO (Representative)
- j) SSGCL (Representative)
- k) XEN Irrigation Southern Dadu Division.
- I) XEN Rice Canal Division
- m) XEN Irrigation Division Sehwan
- n) XEN North Dadu Drainage Division Larkana
- o) PD RBOD
- p) Deputy Director Agriculture
- q) Assistant Commissioner Dadu (Focal Person)

#### 6.4.1.2 Responsibilities

- To visit the dykes frequently & to be in touch constantly with Met Department & Media, to have the update regarding flood & rain status.
- To keep citizens of District well-informed about flood & rain.
- To maintain the record of flood gauge at L.S Bund & F.P Bund on daily basis.
- To coordinate with PDMA to collect updates.
- To counter the rumors & to share factual position with the people of the district.
- To ensure proper maintenance of electricity cables / wires to avoid electrocution.
- To stop Electricity & Natural Gas supply within the district in case of any emergency.
- To ensure uninterrupted supply of electricity particularly for the supply pumping station, hospitals & IDP camps.
- To protect dykes /bunds & irrigation system/ canals.
- To protect ring dykes which have recently been constructed around different towns of the district.
- To arrange electric lights at different dykes/ bunds

- To arrange Police Patrolling & Police pickets so as to have status of dykes.
- To arrange Rangers pickets & Rangers Patrolling so as to have status of dykes & to attend emergencies.
- To arrange V-Wireless sets for proper communication / information of flood situation at different vulnerable points.
- To maintain and repair the culverts./dyke sluice

#### 6.4.1.3 Remarks:

- There is a need for educating the general public.
- Deputy Controller Civil Defense in coordination with the District Information
  Officer will make necessary arrangements to educate the people about the
  safety measures to be adopted in case of emergency in order to handle the
  situation.
- Adequate security measures will be adopted for the protection of the vital installations & vulnerabilities by the concerned departments.
- Vehicular traffic in bazars will be kept under close watch and suspicious activities in or around the crowded business centers will be closely monitored

#### 6.4.2 Relief & Food Committee

#### 6.4.2.1 Members:

- a) Assistant Commissioner (All)
- b) Mukhtiarkar (All)
- c) SDEO Education (All)
- d) NGO Reps
- e) DRM Coordinator
- f) Assistant Director Social Welfare (Focal Person-I)
- g) DEO Schools Dadu (Focal Person-I)
- h) EDO CDD Focal Person-II

#### 6.4.2.2 Responsibilities

- To identify & establish the Relief Centers including 4 tent cities in each Talukas,
  Tent city for Taluka Mehar at Village Peroz Shah, Taluka K.N Shah at Village
  Jakhro, Taluka Dadu at Panhwar Village near Makhdoom Bilawal, Taluka Johi at
  Wahi Pandhi, prior to the emergency if any.
- To ensure proper registration of IDPs and to maintain such records.
- To work out the capacity of relief centres.
- To protect Furniture and fixture of IDP camp schools.

- To constitute 08 Protection / Rescue teams i.e. 2 in each taluka to help in strengthening of dykes & to rescue citizens if there is any emergency.
- To constitute Relief Teams consisting of four members for each relief center to run its affairs.
- To arrange immediate & urgent rescue of the population from the affected area /or area where disaster is imminent.
- To collect boats & vehicles from Transport & Machinery/ Material Committee.
- To receive the affectees & accommodate them in various Relief Centers.
- To distribute food and water to IDPs.
- To seek food assistance from PDMA & different NGOs.
- To constitute 12 Food Teams i.e. 3 for each Taluka

#### 6.4.2.3 Remarks:

- NGOs could be helpful in managing the relief camps
- Pak-Army will have leading role in all rescue operations
- To ensure availability of sufficient reserve stock of edible items at district H/Q some important places so that same could be used during emergency.

#### 6.4.3 Live Stock Committee

#### 6.4.3.1 Members:

- a) Veterinary Doctors
- b) Assistant Director Poultry
- c) Assistant Director Live Stock & Animal Husbandry Focal Person

#### 6.4.3.2 Responsibilities

- To arrange the rescue of livestock with the help of Transport & Machinery / Material Committee.
- To establish maximum temporary shelters / camps for livestock in or around the District.
- Treatment & Vaccination of the livestock.
- To arrange fodder for livestock.

# 6.4.4 Transport & Machinery / Material Committee

#### 6.4.4.1 Members:

- a) XEN I&P (All)
- b) XEN Mechanical Larkana Division.
- c) XEN-Public Health
- d) CMO (All)
- e) Assistant Commissioner (All)
- f) Divisional Forest Officer
- g) Assistant Engineer Agriculture workshop
- h) Deputy Director Agriculture Focal Person

#### 6.4.4.2 Responsibilities

- To approach Mechanical Department of Irrigation for arranging Bulldozers, Excavators, and other Machinery at various vulnerable locations.
- To arrange all machinery / equipment and materials to provide the same to Municipal Services & Restoration Committee.
- To arrange Abkalni material like Bamboos, Towas, Peshmets, Munnas, Warras, Thunies, empty gunny bags etc.
- To arrange Earth Moving Machinery to meet any emergency.
- To move Pak Army & Pak Air force to arrange Helicopters.
- The bulldozers of Agriculture Department will be utilized & they will be kept available at all vulnerable points.
- Irrigation officials will be provided with Hurricane, Lanterns, electric connections on electric bulbs run by generators.
- To arrange the transport and to provide the same to Vigilance, Protection & Rescue Committee.
- To arrange Boats, Vehicles for different committees and IDPs.
- To arrange Helicopters from Army, Navy & Pak Air force.

#### 6.4.5 Health Committee

#### **6.4.5.1 Members:**

- a) DSM, PPHI
- b) Civil Surgeon Dadu
- c) Chairman Dist. Red Crescent
- d) Reps of BHUs
- e) Reps of RHCs
- f) THO (Health)
- g) DHO (Health) Focal Person

#### 6.4.5.2 Responsibilities

- To prepare Emergency wards of District Hospital (Civil Hospital) & Taluka Hospitals for all emergencies.
- To constitute 12 Health Teams i.e. 3 for each Taluka to provide Health cover to IDPs.
- To organize and equip Medical Mobile Teams to be sent to the scene of flood on daily basis.
- To arrange anti venom serum & other lifesaving drugs.
- To provide necessary medicines and medical supplies, blood plasma, Saline Water, and other medical fluids for victims.
- To arrange anti-material spray during the monsoon season.
- To arrange health corner in major IDP camps.

#### 6.4.6 Security Committee

#### 6.4.6.1 Members:

- 1. Deputy Commissioner
- 2. Assistant Commissioner (All)
- 3. Mukhtiarkar (All)
- 4. Pak Army Rep
- 5. Rangers Rep
- 6. Taluka DSPs (All)
- 7. SHOs (All)
- 8. Senior Superintendent of Police Focal Person

#### 6.4.6.2 Responsibilities

• To maintain law and order situation during the flood emergency.

#### 6.4.7 Database & Control Room Committee

#### 6.4.7.1 Members:

- 1. Statistical Officer (Federal Bureau of Statistics)
- 2. Statistical Officer (Sindh Bureau of Statistics)
- 3. NADRA (In-charge)
- 4. DRMC (Disaster Risk Management Coordinator)
- 5. Statistical Officer Education Focal Person

#### 6.4.7.2 Responsibilities

- To act as Control Room.
- To assess and evaluate losses, Compile the data of losses & requirements, and to suggest the District Government required funding and required relief goods.
- To coordinate with all NGOs & to seek their food & material support for IDPs.
- To register all missing persons of district Dadu online namely www.pdma.gos.pk/mpr "Missing Person Registry".
- Addl. DC shall act as a District Focal Person for "Missing Person Registry".

## 6.4.8 Municipal Services & Restoration Committee

#### 6.4.8.1 Members:

- 1. C.M.O (All)
- 2. Assistant Director LG
- 3. Executive Engineer Roads
- 4. Executive Engineer Buildings
- 5. XEN Public Health
- 6. XEN Education Works Focal Person

#### 6.4.8.2 Responsibilities

- To keep fire engines of all TMAs fully functional.
- To keep all hydrants fully functional so that engines could collect water promptly during emergencies.
- Activation of municipal services particularly removal of garbage and sanitation.
- Cleaning of all storm water drains.
- Repairing and proper maintenance of dewatering pumps.
- Proper functioning and maintenance of sewerage pumping stations.
- Proper arrangements of drinking water supply during the emergency arrangement for water tanker.
- To dewater the area under flood/rain.
- To make the roads/ streets motor able.

# 6.5 Specific responsibilities of other stakeholders:

In addition to district administration and committees, the following key stakeholders who can play vital role are as following with their brief responsibilities:

## 6.5.1 Pakistan Army

- Assist the Civil Administration in relief, rescue and evacuation.
- Assist the Civil Departments in preventing, minimizing, emergency repair of affected infrastructure, especially the flood protection bunds and hydraulic or vital structures through the prescribed operation.
- Provide emergency health care, shelter, food support and engineering support.
- Deploy helicopter support in relief operations and distribution of edible in marooned areas in the districts.
- Pakistan Army is one of the prime stakeholders.

#### 6.5.2 Rangers

 Rangers also have a very important role to play throughout flood season. Their sphere of responsibility ranges from patrolling of bunds to security of IDP Camps and overall district during flood season

#### 6.5.3 Police

 Police would ensure vigilance of bunds, disciplined distribution of relief items, security of exit points & IDP camps and maintaining overall law & order in the district.

#### 6.5.4 Law Enforcement Agencies

- Maintain law and order situation in the affected areas.
- Safeguard the property of the people in affected areas.
- Provide assistance in flood warning, rescue, relief and evacuation operation.
- Take security measures at evacuation points, in evacuated areas, in relief centers, relief stores / warehouses.
- Ensure uninterrupted traffic flow in the affected areas.
- Organize alternate road communication if the road are damaged / destroyed.

# 6.5.5 XEN WAPDA / HESCO

- Ensure proper electricity arrangements during emergency.
- In coordination with Irrigation Department, the XEN would ensure special electricity arrangements on critical bunds and points.
- Ensure uninterrupted electricity connection to the pumping stations for draining out rain water from the low lying and slum areas.
- Stream line the lives wires to avoid electrocution.
- Nominate an officer for maintaining liaison with the Relief Department/Deputy Commissioner.

#### 6.5.6 Irrigation Department

- Supervise, direct and control flood prevention measures and bund protections activities, such as strengthening, maintenance, repair and construction of additional embankments.
- Operate Gauge Stations and Provide information and data to authorities concerned for issuance of ALERT AND DANGER warning messages.
- Coordinate survey, investigation of the extent of damages to bunds, embankments, canals and Irrigation installation.
- In addition to its core functions, the Irrigation Department will arrange hurricane lantern and pressurized paraffin lamps for staff at every two miles of bund. Generators would also be arranged at vulnerable points.

#### 6.5.7 Food Department

- District Food Controller / Department along with other line departments would ensure availability of sufficient quantity of dry food stock like Atta, Gur & other essential commodities at relief camps and at the strategic points.
- Organize ration depots at locations required by the Disaster Managers.
- Ensure protection of storage go-downs, from floods and form the law-breakers.

#### 6.5.8 Multinational Companies

• Multinational Companies would also be taken on board and they would provide sand bags, machinery and relief items as and when required.

#### 6.5.9 NGOS / INGOS

- All the NGOs, INGOs, UN, donor agencies, etc. will remain in close coordination with the DDMA.
- All their resources to be utilized with the prior permission of DDMA.

- They will be responsible for submitting their progress reports to the DDMA/ Civil Defense/ Social Welfare on daily basis.
- NGOs / INGOs would provide non-food items to switch the people from cooked food to dry ration.
- They would also conduct special sessions / trainings for awareness of IDPs.

#### 6.5.10 Works And Services Department

- Supervise, direct and control protection of roads and structures.
- Regulate alternate roads/traffic routes on suspension of normal traffic routes by a disaster.
- Coordinate survey investigation of the extent of damage to roads and structures.
- Organize emergency repairs for restoration of public transportation routes.

#### 6.5.11 Education Department

• Ensure availability of school buildings and staff near or within areas likely to be affected by disasters to serve as (emergency) Relief Centers for disasters victims.

### 6.5.12 Information Department

- Disseminate information through mass media to assist the people in meeting flood emergency without creating panic.
- Project sufferings to solicit humanitarian aid for the flood victims.

## 6.5.13 Planning & Development Department (Statistical Wing)

- Assist in obtaining information and data for pre-disaster survey and planning to serve as a basis for prevention measures and for relief operations.
- Assist in evaluation of assessment data obtained with a view to obtain best possible accuracy in determining damage and losses due to disasters.

#### 6.5.14 Social Welfare Department

- Manage the relief camps under the administrative control of DDMA.
- Organize coordination of all the aid giving agencies in providing relief goods to disaster victims.
- Assist the local administration in rescue evacuation and relief operation.
- Determine the need and eligibility of flood victims for rehabilitation services/programme.
- Provide Volunteers for emergency disaster operations.

#### 6.5.15 Pakistan Railways

- Undertake preventive measures to avoid or diminish damage by disaster to infrastructure, machinery, equipment, stock and material.
- Maintain movement of essential commodities and relief supplies.
- Plan and organize emergency repair for restoration of public services.
- Plan for alternate re-routing of rail traffic during emergency/damage.

#### 6.5.16 Sui Southern Gas

 Maintain supply of Sui Gas during floods, by ensuring protection of Gas Supply lines.

## 6.5.17 Local Government Municipal Committees/ Town Committees

- Remain in close coordination with the Civil Defense.
- Manage and ensure availability of safe and clean drinking water to the communities.
- Maintain the drainage system and ensure dewatering pumping and firefighting engines / trucks are in working condition to quickly respond the needs and to minimize the losses.

#### 6.5.18 Civil Defense Executive Volunteers

- Civil Defense / Social Welfare Department will establish the combined control center (Emergency Control room) at the Civil Defense Building for emergency purpose.
- Executive Civil Defense Wardens will remain in close contact with the control center (Emergency Control room) at the Civil Defense Building for every relief work.

#### 6.6 Coordination Mechanism

The Chairman of DDMA (Deputy Commissioner) / controller Civil Defense will direct for executing immediate response to disasters. However the District Administration and Relief Department will undertake relief operation through mobilization Civil Defense Volunteers and of all stakeholders for rescue and relief operations in the areas of responsibilities. Likewise both the authorities will seek the assistance (cash and kind) from PDMA in respect of health, food security etc on need basis.

# 6.7 Warning Mechanism

The receipt of early warning plays key role in disaster risk management and humanitarian response. Pakistan Metrological Department Office and technical agencies are responsible to provide warning information to district administration. However, some of the departments such as irrigation and drainage, agriculture (extension and 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 concerned departments for immediate response as per situation and to route for the general information of the general public specially those at risk. In addition to this DDMA will take the following action in this regard:

- Arrangements of joint meeting of DDMA, line departments and other stakeholders as mentioned above 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.

#### 6.8 Public Information

In disasters, the way press conveys information to the public can magnify or reduce psychosocial distress for the population at risk. There are certain key principles that are often applicable to both man-made and natural disasters. 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 behavior.

The 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, the

DDMA 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 DDMA.

# **6.9** Request For Assistance

It is generally assumed that the district administration is one of the key organization for issuing warnings and alerts and mobilization of required resources in case of emergency. However, the District Disaster Management Authority holds the responsibility for 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 DDMA will arrange the coordination mechanism by inviting all concerned NGOs and institution to put their efforts by working together with all line departments 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.

# 6.10 Requirements

The District Administration normally faces a lot of difficulties in reaching and rescuing the affectees in the absence of both 4x4 vehicles and motor boats during and after the disasters. It is essential to have adequate number of 4x4 vehicles at District Headquarter and one each of Taluka Headquarter duly equipped with wireless sets. Similarly, availability of motor boats, lifesaving jackets, wireless and other accessories need to be available.

# 6.11 Reporting

Every department will submit their updates to the DEOC. The responsible communication officer will collect, consolidate and disseminate regular updates to the concerned stakeholders.

# **6.12 Community Involvement and Participation**

Communities can play integral role in reducing the losses and impact of a disaster. Their knowledge and expertise of local issues, hazards, geology, vulnerabilities, available or alternate livelihoods options could be used to design the disaster response / management projects. Ideally they should be involved in any project to identify the issues correctly and to

overcome challenges. The DDMA and other stakeholders such as NGOs must ensure maximum participation of the communities in every stage of disaster planning to utilize the local expertise, local resources, to raise confidence and ownership levels communities, to mitigate the affects and impact of disasters as required or suggested by communities and to involve them in decision making. The Sindh Local Government Ordinance, 2001 (Ordinance No.XXVII Of 2001) could be referred to further details on the communities involvement in project planning.

# 6.13 Organizing the Drills

Emergency drills are very important for disaster preparedness and planning. Until we don't exercise what we have planned; we won't be able to know exactly what is workable and what is not. The drills enable people to understand their roles and responsibilities in a real time situation and also to identify the gaps or areas to improve, if there are any. The DDMA with an active participation of all stakeholders must organize drills for possible scenarios possibly focusing on search and rescue, evacuation, relief distributions, fire, etc.

#### **REFERENCES**

- Government of Pakistan (2010) Economic Survey of Pakistan 2009-10. Finance Division. Economic Advisor's Wing, Islamabad.
- World Bank (2007) Preliminary Damage and Needs Assessment, ADB and World Bank, Islamabad, Pakistan,
- WFP (2009) Food Insecurity in Pakistan, SDPI, SDC, WFP Publication, WFP, Islamabad.
- Government of Pakistan (2006) Pakistan Livestock Census. Agricultural Census Organization, Ministry of Food and Agriculture. Livestock Census.
- Government of Pakistan (2000) Agriculture Census.
- Government of Pakistan (1998) Population Census, Bureau of Statistics, Islamabad.
- District Dadu Disaster Risk Reduction Plan 2009 and 2013



#### ANNEX 1: DETAILES OF CONTINGENCY PLAN FOR VARIOUS HAZARDS IN DISTRICT DADU

The following Annexure gives the detailed breakdown of hazard-specific contingency plans. In constructing the plans a number of quantities and assumptions have been made. These are explained below:

#### A. Food:

The food package per household for one month includes the following items:

Rice: 10kgs Lentils: 10kgs Cooking Oil: 05 liters Wheat Flour: 80kgs Sugar: 05 kg Tea: 01 kg **Iodized Salt:** 01 kg **Red Chilies:** ½ kg

The above food package is designed with the consultation of WFP and provides about 2,150 K calories/person/day. The prices of food are based on current market rates. The fluctuation in the food prices is frequent so it can be change any time of the year.

The quantity on the above mentioned food items may change according to the area context or geographical and the eating habits of the affected communities.

#### B. Kitchen Utensils:

Work (Tawa)	01 Piece
Plates - different size	12 Pieces
Sauce Pan	01 Piece
Cooking pot	01 Piece
Cups	06 Pieces
Small bowls	05 Pieces
Big Bowl	01 Piece
Glasses	06 Pieces
Jug	01 Piece
Water Cooler - 10 liter	01 Piece
Spoons	06 Pieces
Cloth	01 Piece
Knife	01 Piece
Basket / Plate for bread	01 Piece
Cooking spoons	02 Pieces
Bucket with Mug	01 Piece
Cooking stove with gas cylinder	01 Piece
Match Box	
Lantern	01 Piece
Washing soap with foam	

#### C. Livestock Restocking:

The number of livestock is recommended with the consultation of community, as well as with the Livestock Department at the district level. This package is highly recommended for the poorest of the poor segments of society.

#### D. Agriculture Inputs:

Wheat seed/Maize seed/Vegetable seed, potato seed/kitchen package and fertilizer: the quantity of the agriculture inputs are recommended on the basis of consultation with farming community in the field and verified with technical experts of agriculture department at local level.



Annex 2: Population numbers in different UCs at risk of likely to be affected by different hazards in district Dadu

Most Affected UCs b	y River Flood				
Tehsil	UC		Male	Female	Total
Mehar	Mangwani	U.C.Total	14054	12760	26815
Mehar	Khan-Jo-Goth	U.C.Total	14946	13999	28945
Mehar	Faridabad	U.C.Total	14612	13845	28457
Dadu	Siyal	U.C.Total	15246	13510	28756
Dadu	PAT	U.C.Total	16290	14691	30981
Dadu	Monder	U.C.Total	14317	13231	27548
Total			89465	82037	171502
Medium Affected UC	Cs by River Flood	•		1	•
Mehar	Nao Goth	U.C.Total	13905	12772	26677
Mehar	Shah Panjo	U.C.Total	15460	14713	30173
Mehar	Kazi Arif	U.C.Total	16461	15393	31854
Mehar	Bali Shah	U.C.Total	14346	13160	27505
Dadu	Allahabad	U.C.Total	13794	12924	26718
Dadu	Khudabad	U.C.Total	14347	14062	28409
Dadu	Phulji Station	U.C.Total	8726	8246	16972
Dadu	Piaro Station	U.C.Total	16696	15758	32454
Dadu	Pipri	U.C.Total	13624	12222	25846
Total		0.0	127357	119249	246607
Most Affected UCs b	y Torrential Flood		1 - 1 - 1 - 1	1	1 - 10001
K.N.Shah	Burira	U.C.Total	14957	13227	28184
	Gozo	U.C.Total	14523	13962	28485
	Kandechukhi	U.C.Total	14590	13432	28022
	Mitho Babar	U.C.Total	13,323	12,756	26,079
	Kakar	U.C .Total	14555	13726	28281
Johi	Bahawal Pur	U.C.Total	14070	12708	26778
	Drigh Bala	U.C.Total	11859	10492	22350
	kamal khan	U.C.Total	14524	13111	27636
	Phulji	U.C.Total	12287	11371	23658
	Tando Rahim khan	U.C.Total	13837	13254	27091
	Johi	U.C.Total	20197	19188	39385
Total	Join	O.C. Total	158723	147225	305948
	Cs by Torrential Flood		130723	147223	303340
K.N.Shah	Chorre Qamber	Mado Rayati	1929	1714	3644
K.IV.SIIdii	Thalo	U.C.Total	15257	14246	29502
	Kandechukhi	Baid	2679	2322	5001
Johi	Pat Gul Muhammad	U.C.Total	13129	11588	24717
30111	CHHini	U.C.Total	14351	12670	27021
	Tore	U.C.Total	11312	10449	21761
Total	Tore	U.C. TOtal	58657	52989	111647
Most Affected Ucs b	y Drought		38037	32363	111047
K.N.Shah	Chorre Qamber	Mado Rayati	1929	1714	3644
Johi	Tore	U.C.Total	11312	10449	21761
	Pat Gul Muhammad	U.C.Total	13129	11588	24717
		U.C.Total			
Total	CHHini	U.C. TOTAL	14351	12670	27021
Total	na hu Duauaht		40722	36421	77143
Medium Affected Uc		Luczii	4.4070	42700	26776
Johi	Bahawal Pur	U.C.Total	14070	12708	26778
	kamal khan	U.C.Total	26228	13784	12443
	Phulji	U.C.Total	22453	11661	10792

	Tando Rahim khan	U.C.Total	25710	13132	12579
	Johi	U.C.Total	37378	19168	18210
	Drigh Bala	U.C.Total	21211	11254	9957
Total			147049	81707	90758



## **Annex 3: List of Important Contacts:**

S.NO.	DESIGNATION	PH: NU	IMBERS
1	Deputy Commissioner (DC) Dadu.	Off: 0259200250-	Fax- 025-9200252
		1	
2	Addl: Deputy Commissioner	Off:025- 9200256	Off:025-9200257
3	Assistant Commissioner (Revenue) Dadu.	Off: 025-9200278	Res: 025-4611882
4	Assistant Commissioner (Revenue) Mehar.	Off: 025-4730241	Res: 025-4730692
5	Mukhtiarkar (Revenue) Johi.	Off:025-4740208	Res:025-4611882
6	Mukhtiarkar (Revenue) Dadu.	Off:025-9200295	Res:025-9200295
7	Mukhtiarkar (Revenue) Mehar.	Off:025-4730218	Res:025-4730218
8	Mukhtiarkar (Revenue) K.N.Shah.	Off:025-4510359	Res:025-4510359
9	XEN Education Works	Off: 025-9200282	Res: 025-9200283
10	District Officer Education Secondary/Elementary	Off: 025-9200204	Res: 025-9200201
11	District Health Officer (DHO) Dadu.	Off: 025-9200086	Res: 025-9200088
12	Civil Hospital Dadu.	025-9200080	
13	Taluka Hospital Johi.	025-4740212	
14	Taluka Hospital Mehar.	025-4690225	
15	Taluka Hospital K.N.Shah.	025-720292	
16	Assistant Director Local Government	3337061526	
17	Chief Municipal Officer Dadu.	025-9200270-1	
18	Chief Municipal Officer Johi.	025-4740220	
19	Chief Municipal Officer Mehar.	025-4690370	
20	Taluka Municipal Officer K.N.Shah.	025-4720255	
21	XEN Irrigation Southern Dadu	025-9200070-71	3008964224
22	XEN Irrigation Shahbaz	3008370526	
23	XEN Irrigation Rice Canal	3003402214	
24	XEN RBOD	3332775585	
25	XEN North Dadu Drainage Division Larkana	074-9410063	
26	XEN Public Health	9200376	
27	XEN Roads	9200284	
28	XEN Buildings	9200397	
29	XEN Public Health	9200376	
30	Senior Superintendent Police (SSP) Dadu	Off:0259200350-1	Fax.025-9200253
31	Pakistan Navy (HQ COM KAR)	021 48506020	Ops Room 021- 48507222
32	Pak Army	025-9200029-30	•
33	Rangers	025-9200406	

Annex 4: Institutions For Livelihood Support at district level

Tehsil/Type of Facility	Dadu	Johi	Khairpur Nathan Shah	Mehar	Distt Total
Veterinary Hospital	1	1	1	1	4
Veterinary Dispensary		2	1	2	5
Veterinary Center	12	8	16	18	54
Mobile Veterinary Dispensary	1			1	2
Artificial Insemination Center	2	1	1	1	5

Annex: 5 Health Facilities 2009-10 In Public Sector - Dadu District

S. No.	Tehsil/Category	Dadu	Johi	Khairpur Nathan Shah	Mehar	Distt Total
1	District Headquarter (DHQ) Hospital	1				1
2	Taluka Headquarter (THQ) Hospitals		1	1	1	3
3	Rural Health Center (RHC)		1	1	1	3
4	Basic Health Units (BHU)	14	9	13	10	46
5	Government Dispensaries	1	7	2	5	15
6	Experimental Dispensaries	11	1	6	6	24
7	Mother Care Health(MCH) Centers	1			2	3
	Total					95

Annex: 6 Resources Available with Municipal Committee (All)

No	Items/Equipment/ Machinery	Quantity	Where about of Equipment/Machinery
1	Tractor Trolley	06	03 Dadu, 01 Johi, 01 K.N Shah, o1 Mehar Municipal Committee
2	Tractor	07	04 Dadu, 01 Johi, 01 K.N Shah, 01 Mehar Municipal Committee
3	Refuse Van	04	01 Dadu, 01 Johi, 01 K.N Shah, 01 Mehar (TMAs)
4	Bulldozer	08	Available with Agriculture Workshop Dadu.
5	Pump Machines	06	Available with District Administration.
6	Disposable Tank	07	02 Dadu, 01 Johi, 01 K.N Shah, 02 Mehar Municipal Committee
7	Fire Engine	06	02, Dadu, 01 Johi, 01 KN Shah, 02 Mehar Municipal Committee
8	Potohar Jeep	03	01 Johi, 01 Mehar & 01 KN Shah Municipal Committee
9	Hand Trollies	270	50 Johi 150 Dadu 40 Mehar 30 KN Shah Municipal Committee
10	Diesel Engine	22	05 Dadu, 01 Johi, 03 Mehar, 03 KN Shah Municipal Committee
			10 With District Administration
11	Generator	02	02 Available with District Administration



ANNEX 7: TEHSIL/UC LEVEL POPULATION DATA WITH 2013 PROJECTION

ANNEX 7.	TEHSIL/ OC LEV		ation project		Literac	11011	Religion		н	ousing Un	it By Type		
MC / UC Name	City / Village / Mouzza	Male	Female	Total	y Ratio %	Muslims	Non Muslim	≥18	Total	Pacca	Semi Pacca	Kacha	Area in Acres
Total -District (R+U)		868187	805816	1674003	36	1655765	18239	1179606	303761	71612	48217	183932	
Total - District Urban		250184	234854	485038		475199	9839	573084	76643	42283	11264	23095	
Total -District Rural		618004	570961	1188965		1180566	8399	606522	227119	29329	36953	160837	
Total -Tehsil (R+U) Dadu		280941	259555	540497	46	533630	6867	524140	96019	32404	17527	46088	
Total -Tehsil Urban Dadu		123911	113743	237654		232970	4684	374696	36986	23219	5508	8259	
Dadu 1	U.C Total	30052	27566	57617	60	56577	1040	28649	8502	4056	2339	2107	
Dadu 2	U.C Total	27798	26732	54530	70	53425	1105	284892	9239	6557	626	2056	
Dadu 3	U.C Total	28313	25071	53384	55	51380	2004	26202	7798	4633	841	2324	
Dadu 4		30015	27112	57126	53	56795	332	27722	8773	6379	1306	1089	
Phulji Station		7734	7263	14997	61	14796	201	7233	2673	1595	396	683	
Total - Tehsil Rural Dadu		157030	145811	302841	· ·	300657	2184	149442	59033	9185	12019	37829	
Allahabad	U.C.Total	13794	12924	26718	48	26534	183	13130	5490	884	1229	3377	
	Jakhpari	797	686	1483	41	1483	0	665	309	31	38	241	1802
	Riverine (Kacha zone) Nasrani	80	74	154	3	154	0	60	36	0	21	15	866
	Riverine (Kacha zone) Rap	290	280	570	19	570	0	299	109	0	109	0	2414
	Keenjhar	2484	2479	4963	53	4962	1	2374	1002	159	104	739	3169
	Khairo	1217	1222	2439	45	2412	27	1210	473	61	116	295	2219
	Khariro Pako	3745	3641	7385	49	7353	33	3653	1573	195	164	1214	3194
	Marvi	593	551	1144	52	1144	0	572	245	7	47	190	2134
	Rap	3458	3278	6736	59	6665	72	3223	1455	382	462	611	2927

	1	1			1					Ī	I I	ı	
	Samhin	1131	712	1843	20	1794	48	1074	291	49	169	74	1138
Kalhora	U.C.Total	15122	14374	29495	35	29396	99	14215	5589	895	1202	3493	
	Badani	2529	2549	5078	33	5041	37	2532	1039	49	101	889	3406
	Bhand	2677	2492	5169	30	5156	14	2568	958	61	417	480	3729
	Kalhora	3168	3042	6211	39	6198	13	2920	1172	192	244	736	2094
	Kurpur	2904	2685	5589	21	5557	32	2746	1079	129	179	771	3083
	Phaka	3843	3606	7449	47	7445	3	3449	1341	465	261	615	4531
Khudabad	U.C.Total	14347	14062	28409	46	27954	455	14086	5293	1075	1369	2849	
	Aminini	2175	2078	4253	39	4246	6	2141	833	100	31	703	3485
	Buth Malho	2724	2500	5224	31	5219	5	2617	1074	291	97	686	2683
	Khudabad	4288	3819	8106	16	8019	87	3672	1503	283	626	595	2947
	Khudabad Jagir	1618	1310	2928	50	2802	126	1741	437	21	72	344	651
	Nau Lakho	3543	4356	7899	54	7670	229	3917	1446	380	544	522	2836
Makhdoom Sahib	U.C.Total	14791	13876	28667	44	28551	116	13811	5417	1356	770	3292	
	Baghban	3284	3128	6413	40	6389	24	3272	1149	188	282	679	4174
	Jung	1705	1529	3234	35	3193	41	1537	616	132	102	382	3006
	Kandi	4914	4487	9401	50	9376	25	4383	1742	722	110	910	4547
	Makhdoom Sahib	1814	1853	3668	50	3667	1	1724	773	157	177	439	1920
	Pir Gunio	3073	2880	5952	42	5926	26	2893	1137	158	98	881	3405
Monder	U.C.Total	14317	13231	27548	36	27336	212	14086	5147	819	567	3762	
	Riverine (Kacha zone) Shahani	127	113	240	49	240	0	98	47	0	0	47	1361
	Khasa Chandia	5772	5338	11110	34	11023	87	5939	2031	455	296	1280	5671
	Marakhpur	3256	2830	6086	33	5998	89	3293	1168	214	109	845	4298
	Monder	4339	4252	8591	43	8557	34	4062	1648	147	127	1375	5316
	Shahani	822	699	1520	23	1519	1	693	253	3	35	215	2707
Muradabad Channa	U.C.Total	14079	12919	26999	26	26766	233	13398	5625	244	1911	3471	
	Bakhrani	4664	4563	9226	42	9139	87	4445	1859	153	939	767	4496
	Buthi	3531	2963	6494	20	6418	76	3406	1307	25	18	1264	3699

	Pipar Panjan	980	997	1977	21	1929	47	1041	495	19	208	268	2576
	Soonhyoon	3151	2823	5973	18	5952	21	2762	1165	31	215	919	4711
	Soonhyoon Jagir	90	74	163	28	163	0	79	30	1	12	17	185
	Waryaso	1665	1500	3165	30	3164	1	1666	770	15	519	236	1619
PAT	U.C.Total	16290	14691	30981	35	30794	186	16050	6384	450	1243	4691	
	Dhoro Damario	879	857	1735	35	1733	2	879	348	3	109	236	2444
	Ghallo	154	163	317	4	282	35	173	56	7	41	7	1096
	Riverine (Kacha zone) Pambi	243	189	432	423	9	228	109	0	109	0	2628	
	Riverine (Kacha zone) Sita	1135	985	2120	20	2120	0	1223	343	17	84	242	6118
	Nasrani	510	365	875	8	858	17	401	175	0	166	9	2822
	Pako Pambi	242	221	464	43	464	0	167	82	0	17	65	2782
	Pako Sita	6707	6061	12768	37	12729	39	6348	2842	194	233	2415	3417
	PAT	6419	5850	12269	39	12185	84	6630	2432	230	485	1716	3945
Phulji Station	U.C.Total	8726	8246	16972	43	16822	150	8357	3456	216	1031	2209	
	DawacHH	1645	1551	3196	44	3183	13	1604	663	21	244	398	2837
	Riverine (Kacha zone) Khariro	875	746	1621	7	1513	107	772	321	0	321	0	1349
	Riverine (Kacha zone) Puranodero	698	632	1330	6	1330	0	613	242	0	241	1	1604
	Pirtarho	3573	3388	6961	49	6934	26	3479	1385	101	90	1194	4412
	Pirtarho Jagir	86	80	166	20	166	0	75	32	0	32	0	1614
	Puranodero	1850	1850	3701	58	3696	4	1816	813	94	104	615	5744
Piaro Station	U.C.Total	16696	15758	32454	49	32194	260	15475	6310	1568	987	3755	
	Juberji	4202	3978	8180	51	8124	56	3742	1730	234	172	1324	3519
	Phaka	3903	4153	8056	45	8013	42	3996	1561	273	503	785	2512
	Sutiaro	1669	1485	3154	51	3137	17	1644	605	75	115	415	3287
	Taga	6923	6144	13067	50	12922	145	6094	2414	985	197	1231	3592

Pipri	U.C.Total	13624	12222	25846	37	25742	104	12788	4967	1249	568	3150	
	Dadu	6172	5270	11441	33	11399	42	6128	2167	455	349	1363	4125
	Duabo	1986	1772	3759	49	3732	26	1673	680	146	60	475	2641
	Pipri	5466	5181	10647	38	10611	36	4986	2118	648	158	1312	3228
Sial	U.C.Total	15246	13510	28756	30	28569	187	14046	5350	427	1140	3782	
	Belo Choi	630	562	1192	7	1149	43	532	224	7	76	140	1604
	Chanrath Jagir	3417	3181	6598	44	6568	31	3218	1217	64	236	917	3122
	Chanrath Rayati	94	115	209	15	209	0	88	41	0	0	41	6118
	Choi	553	462	1015	2	1015	0	434	141	3	23	115	4141
	Dubi Jagir	80	87	168	40	168	0	66	28	0	1	27	1203
	Dubi Rayati	2515	2408	4923	31	4889	34	2365	894	66	216	611	2864
	Khushik	1713	1456	3170	45	3165	4	1395	602	136	57	409	5732
	Malkani	608	506	1114	8	1102	12	525	269	18	40	211	1886
	Noorja	1265	918	2183	37	2183	0	1005	392	17	38	338	2678
	Sial	3402	2918	6320	17	6263	57	3419	1183	8	431	743	5057
	Sidhwah	966	900	1866	43	1860	6	998	360	109	21	230	2931
Total-Tehsil (R+U)Johi		137407	124981	262388	24	260808	1579	131445	50096	4403	8209	37484	
Total-Tehsil Urban Johi		20197	19188	39385	46	39158	228	19771	6511	1891	1396	3225	0
Johi	U.C.Total	20197	19188	39385	46	39158	228	19771	6511	1891	1396	3225	
Total-Tehsil Rural Johi		117210	105793	223002		221650	1352	111675	43583	2511	6813	34259	
Bahawal Pur	U.C.Total	14070	12708	26778	28	26529	248	12868	4828	237	499	4091	
	Baghiari	403	373	776	18	776	0	365	149	0	2	147	2839
	Bahawal Pur	2618	2335	4953	26	4860	94	2192	788	69	11	709	2974
	Buthi	994	931	1925	25	1922	3	880	365	0	30	335	5758
	Dirgh Hetheen	1966	1850	3817	27	3807	9	1870	713	58	77	578	4287
	Jam Pur Panhwarki	1676	1585	3261	19	3245	16	1676	650	22	94	534	4405

	Khat	563	413	976	3	972	4	537	151	3	0	148	2772
	Saranjhri	3288	2935	6222	36	6131	91	2853	1058	34	108	917	4060
	Vegaji Jagir	140	118	258	31	257	1	134	54	0	3	51	208
	Vegaji Rayati	2421	2167	4589	33	4560	28	2361	898	51	174	673	3516
CHHini	U.C.Total	14351	12670	27021	14	26877	144	13749	5620	255	1070	4295	
	Aroni	113	94	207	3	207	0	109	50	0	33	17	1492
	Basham Fakir	1796	1536	3332	16	3325	6	1636	556	12	26	518	5529
	Berah	397	400	798	21	798	0	329	162	7	6	149	6047
	CHHini	1780	1513	3293	18	3276	17	1745	739	64	94	580	4631
	Dhabhari	381	297	679	11	678	1	322	123	0	0	123	3397
	Dhori Kunri	62	54	116	116	0	69	21	0	0	21	15927	
	Dhounk	695	622	1317	8	1301	16	734	298	4	76	217	4351
	Gahi Charo	300	235	535	4	532	3	269	113	84	11	18	3781
	Gorandi	102	78	180	180	0	109	44	0	1	43	3383	
	Khanwah	60	64	124	124	0	48	24	0	24	0	3538	
	KharicHH	1471	1437	2908	15	2872	36	1452	523	34	159	330	5699
	Koorkalan	607	474	1081	6	1070	12	574	246	3	79	164	6087
	Lohri	43	40	83	83	0	28	14	0	14	0	3310	
	MacHHko	71	67	138	2	138	0	76	30	0	14	16	3416
	Makhan Belo	318	328	646	1	646	0	288	112	0	112	0	2175
	Pat kanhiri	743	690	1433	9	1431	2	744	310	7	27	275	4943
	Phadak	300	280	581	6	572	8	319	117	0	13	104	4292
	Pir Gaji Shah	844	723	1567	14	1542	25	860	457	6	7	443	1283
	Sakro	1234	1104	2338	6	2334	4	1235	509	22	91	396	4765
	Shah Hasan	1314	1106	2420	20	2415	5	1170	505	2	209	294	3613
	Tor/Tori	1720	1524	3243	25	3238	5	1631	665	7	73	584	3199
Drigh Bala	U.C.Total	11859	10492	22350	25	22289	61	11506	4293	130	544	3619	
	Allahyarero	535	432	967	20	965	2	430	205	0	4	200	3714
	Dirgh bala	4301	3569	7870	22	7834	36	4188	1519	88	237	1194	7684
	Gaji Khan	219	171	390	14	389	1	224	78	1	1	76	4230
	Haji Khan	1197	1190	2387	37	2386	1	1212	481	4	44	433	4655
	Halejo	913	883	1796	32	1796	0	1055	290	28	7	254	4122
	Kurjamak	1806	1703	3509	18	3497	12	1673	633	0	137	496	3675
	Naushero	975	848	1823	36	1818	5	915	354	0	34	321	4531
	Pherodero	560	437	997	10	995	2	534	210	0	6	204	3677

	Qubo												
	Qalander No.	44	39	83	15	83	0	41	21	0	17	4	3837
	1												
	Qubo												
	Qalander No.	1247	1181	2428	28	2428	0	1171	481	8	57	416	3356
	2												
	Sakar Halejo	60	40	100	2	98	2	62	19	0	0	19	2251
kamal khan	U.C.Total	14524	13111	27636	18	27330	306	14502	5385	655	1005	3724	
	Abad	2323	1982	4305	10	4277	28	2323	752	38	56	658	2562
	Chana	1420	1332	2752	14	2664	89	1497	490	32	40	418	3738
	Daramachi	3415	3047	6462	25	6392	71	3410	1515	181	650	684	5932
	Gaha	629	650	1279	23	1274	5	730	238	11	0	228	1694
	Johi	5095	4558	9653	18	9570	83	4945	1768	329	214	1225	5617
	Nunari	1643	1543	3185	18	3155	31	1595	624	64	46	513	4628
Pat Gul Muhammad	U.C.Total	13129	11588	24717	32	24644	73	11816	4760	99	469	4192	
	Ber Bughio	174	139	313	10	312	1	146	70	4	6	59	4025
	Duabo	482	385	866	22	860	6	429	156	0	39	117	4137
	Hairo Khan	832	804	1636	25	1631	5	835	348	0	23	325	5128
	Hasnani	262	263	526	19	523	3	244	109	0	0	109	3529
	Kathia Barani	569	543	1112	48	1112	0	464	202	0	1	200	4714
	Kurfojo	1757	1426	3182	53	3159	23	1544	494	68	127	300	2332
	Malhar	0	0	0									
	Barani	0	U	U									
	Masodero	2604	2276	4880	23	4864	16	2568	1015	9	39	966	4481
	Mir Wah	138	96	234	2	234	0	151	51	3	47	0	3526
	Murid Dero	1761	1542	3302	17	3291	12	1352	574	6	37	531	3591
	Naichki	421	381	803	56	803	0	350	164	0	3	160	4963
	Pahore	257	224	482	17	482	0	200	94	0	3	91	4528
	Pat Gul Muhammad	1402	1282	2685	53	2684	1	1294	541	1	21	519	3388
	Pataro No.1	136	94	230	31	230	0	101	37	1	24	12	4415
	Pataro No.2	16	13	28	39	28	0	17	3	0	1	2	4245
	Pataro No.3	2093	1911	4004	30	3999	5	1940	824	6	36	782	3816
	Suknai	227	201	428	1	428	0	178	79	0	61	18	4107

	Tori No1	1	6	7		7	0	3	1	0	0	1	4650
	Tori No2	0	0	0		<u> </u>							
Phulji	U.C.Total	12287	11371	23658	28	23513	145	11548	4574	290	751	3533	
,	Kot Bajo	1189	1113	2301	42	2299	2	955	401	28	31	342	3176
	Mianji Kandi	1856	1805	3661	41	3615	45	1912	642	71	223	349	2935
	Mothri	1696	1655	3352	14	3335	17	1601	706	37	113	556	5482
	Nooro	209	194	403	31	381	21	191	76	11	32	34	4885
	Phulji Jagir	1461	1349	2810	15	2789	21	1490	567	33	22	512	3438
	Phulji Rayati	2278	2073	4351	22	4331	20	2078	893	64	138	690	4986
	Shah Moroio	1282	1161	2444	30	2436	7	1179	474	32	89	353	4435
	Thariri Jado Shahid	2316	2022	4338	33	4328	11	2143	813	14	103	696	2532
Sawaro	U.C.Total	11840	10150	21990	12	21806	183	10963	4444	96	811	3536	
	Araro	589	470	1059	18	1035	24	547	210	4	4	202	3535
	Bakhir Shahid	433	379	812	13	808	4	424	191	0	33	158	3996
	Jampur Lundiki	251	223	474	26	455	19	255	111	1	9	100	4028
	Miran MacHHi	535	418	954	35	946	7	393	165	18	40	107	5995
	Nai Taki	157	116	273	11	272	1	162	60	0	27	33	2259
	Pat Suleman No.1	720	583	1302	8	1302	0	648	277	2	3	272	4711
	Pat Suleman No.2	1792	1375	3167	4	3156	12	1530	560	2	516	42	3437
	Pat Suleman No.3	164	188	352	6	351	1	176	69	0	2	66	3546
	Pat Suleman No.4	43	37	80	3	80	0	30	14	0	0	14	3436
	Pir Dhuari	1033	900	1932	21	1916	17	954	370	34	24	312	4866
	Sawaro	1151	1142	2293	12	2292	1	1196	484	4	18	462	4834
	Shole jagir	2034	1721	3754	10	3743	12	2055	825	22	37	766	8859
	Thulh	2938	2599	5537	12	5450	87	2595	1105	6	96	1002	6027
Tando Rahim khan	U.C.Total	13837	13254	27091	23	26958	133	13932	5294	622	1096	3575	
	Angai	2298	2177	4475	24	4453	22	2405	980	56	294	630	6164

	Bahlil Shah	531	511	1042	9	1042	0	628	253	2	0	251	3545
	Jalab	210	190	399	0	399	0	217	84	2	11	72	2681
	Kakrani	251	224	475	14	475	0	221	92	7	47	37	5097
	Khandhani	1337	1252	2589	7	2585	4	1331	581	14	59	509	5866
	Khoh Mano	2123	1951	4075	32	4072	3	2030	751	196	150	405	5281
	Nali	848	773	1622	21	1593	28	859	299	38	101	159	5478
	Shadman	202	190	392	5	392	0	219	98	0	56	42	3039
	Shori Jagir	812	683	1495	28	1493	2	714	294	2	112	180	4853
	Tok Kassim	920	1083	2003	23	2003	0	900	318	66	21	230	6605
	Wahi Pandhi	4303	4219	8522	27	8449	74	4409	1546	239	245	1061	4821
Tor	U.C.Total	11312	10449	21761	20	21705	56	10791	4388	127	568	3694	
	Chakar Kot	946	872	1819	10	1817	2	881	332	0	9	323	3512
	Din Panah	962	822	1784	25	1784	0	976	364	4	24	335	3360
	Kasbo	958	829	1787	17	1785	2	924	396	2	34	360	3431
	ladhodero	62	59	121	4	121	0	61	24	0	2	22	3329
	lalhar	2753	2669	5422	26	5418	4	2415	1077	34	211	832	5534
	Malko Jagir	2221	2062	4283	23	4283	0	2151	934	3	39	891	5403
	Nai Keti	329	333	662	3	660	2	372	129	0	98	31	1662
	Pai	262	279	542	4	541	1	284	118	0	6	112	3173
	Potho	841	758	1598	1	1598	0	733	364	3	2	359	3216
	Rajodero	981	898	1879	20	1869	9	1020	382	14	11	358	5055
	Tori	998	869	1867	35	1832	35	975	264	63	130	71	6309
Total-Tehsil (R+U)		200141	186681	386823	38	383323	3499	227033	71719	18149	10491	43079	
Khairpur Nathan Shah		0	0	0									
Khairput Nathan Shah	U.C Total	27470	26325	53795	58	53472	322	29020	8462	6015	522	1925	
Sita Road	U.C Total	25455	24136	49591	47	49039	552	49039	9101	4296	1891	2915	
Total - Tehsil Rural Khairpur Nathan Shah		147216	136221	283436	342	280811	2626	148975	54154	7838	8079	38237	
Bughia	U.C Total	14359	13716	28075	29	27866	209	14190	5291	675	631	3985	
	Bawan	1695	1503	3198	12	3190	8	1248	612	16	0	596	8042

	Meha	2166	2025	4192	31	4163	28	2095	630	43	254	332	2420
	Phekratho	1879	1882	3761	30	3743	18	2079	769	39	20	710	1292
	Qomicharo	3055	2913	5968	25	5911	57	3397	1251	209	75	967	2637
	Veji	3359	3134	6493	35	6486	7	3134	1137	158	241	739	8036
	Wasai	2204	2258	4462	33	4373	90	2236	894	211	42	640	2237
Burira	U.C.Total	14957	13227	28184	22	28049	135	14881	5868	236	1037	4595	
	Akhar Nari	74	73	146	4	146	0	85	35	0	0	35	2582
	Bhangar	170	170	339	3	337	2	178	55	0	55	0	1619
	Bug	21	31	52	14	52	0	34	13	0	13	0	3377
	Burira	4966	4389	9355	33	9306	48	4744	1704	127	324	1253	1216
	Chandan	2567	2228	4794	27	4790	4	2439	773	4	17	752	5717
	Dingano	232	185	417	15	417	0	241	107	0	4	102	3763
	Kario Ghullamullah	39	40	79		79	0	48	20	0	12	8	3780
	Kario Mitho Zangejo	604	587	1191	22	1191	0	595	253	17	39	197	1765
	Kario Mitho Zangejo Jagir	0	0	0									
	Khurbi No-1	13	30	42		42	0	16	5	0	5	0	2256
	Khurbi No-2	51	31	81		81	0	30	16	0	4	12	3510
	Kur Budho	1730	1578	3309	26	3300	8	1856	872	73	43	756	2882
	Kur Mir Mohammad	1597	1500	3098	12	3091	7	1641	680	1	26	653	4844
	Malam No-1	23	23	46		46	0	16	7	0	7	0	3768
	Malam No-2	17	20	37		37	0	13	5	0	5	0	4481
	Mukhi No-1	260	198	458	1	446	13	255	124	0	59	65	3537
	Mukhi No-2	46	26	73		73	0	42	21	0	21	0	1520
	Radhy No-1	242	207	449	4	449	0	267	111	0	4	107	4301
	Radhy No-2	467	398	865	4	855	11	530	283	12	0	271	2316
	Salar No-1	0	0	0									
	Salar No-2	272	181	453	0	453	0	306	92	0	87	5	5989
	Salar No-3	284	236	521	1	510	11	246	107	0	107	0	3876
	Salar No-4	1059	846	1905	8	1894	12	1130	503	3	121	379	4336
	Salar No-5	223	251	474	2	453	21	170	85	0	85	0	4685

Butra	U.C.Total	15229	14189	29417	38	29271	147	15180	4558	453	519	3586	
	Balidera Jagir	0	0	0									
	Balidera Rayati	2029	1741	3770	46	3770	0	1819	335	1	1	333	1270
	Butra	2239	2170	4409	42	4368	41	2227	703	130	73	500	1216
	Isso Machi	1553	1445	2998	41	2955	43	1709	577	68	59	450	1864
	Ladhodero	1457	1356	2813	23	2812	1	1406	379	7	81	290	1834
	Mari	950	914	1864	54	1857	7	922	258	69	36	154	1958
	Mari Seerabad	2038	2029	4067	44	4046	21	2191	669	96	40	533	1026
	Miro Kalhoro	2795	2649	5444	29	5434	11	2827	1052	42	193	817	2255
	Rap Khachi	1134	1015	2148	28	2127	21	1099	361	26	18	317	3019
	Sukhpur	1033	871	1904	39	1904	0	984	223	14	18	191	1825
Chorre Qamber	U.C.Total	14247	12457	26705	21	26490	215	14908	5724	1105	1012	3608	
	Abad Jagir	3163	2931	6095	17	6064	31	3517	1459	320	284	856	1851
	Bahadurpur	2762	2171	4932	26	4898	35	2936	684	102	148	434	1723
	Bambhiriyoo n	299	294	593	7	515	78	287	134	32	16	87	1619
	Bori No-1	98	91	189	6	189	0	87	41	0	3	38	3890
	Bori No-2	177	163	340	1	340	0	131	61	0	0	61	4203
	Chejapur Jagir	432	575	1007	56	1005	2	780	261	27	34	199	498
	Khuh Misri	1825	1493	3318	1	3305	13	1549	718	141	327	250	12491
	Mado Jagir	491	310	801	13	799	2	432	190	21	87	82	2078
	Mado Rayati	1929	1714	3644	31	3637	6	1846	804	31	94	679	1469
	Qambar Rayati	392	327	719	11	709	9	412	137	0	0	137	1258
	Qumber Jagir	207	168	374	26	374	0	204	63	0	0	63	1806
Gozo	U.C.Total	14523	13962	28485	32	28229	256	15283	5468	699	510	4259	
	Begodero	1851	1865	3716	37	3716	0	2193	764	122	143	498	1203
	Gadehi	4117	3953	8070	37	8050	20	4243	1606	346	65	1194	2516
	Ghachal	1264	1117	2381	50	2366	16	1222	531	14	43	474	4611
	Gozo	1951	2001	3952	45	3892	60	2080	702	151	55	496	1479
	Kur Hussain	1557	1404	2961	20	2917	44	1667	494	20	81	392	3724
	Kurkit Jagir	518	519	1038	39	964	74	517	200	8	16	176	1494

	Pejaho	1335	1252	2587	21	2572	15	1402	444	22	12	410	1903
	Rap	1928	1850	3779	25	3750	28	1958	729	16	95	618	1703
Kakar	U.C .Total	14555	13726	28281	47	27967	314	14329	5410	1252	1111	3047	1703
Nakai	Boriri	3840	3609	7449	55	7393	56	3711	1342	457	133	752	4001
	Choukhandi	3587	3349	6935	46	6784	152	3664	1503	290	642	571	2472
	Kakar	4222	3859	8081	40	8026	55	3880	1441	156	299	986	2647
	Khat Lashkar Khan	2906	2909	5815	47	5765	51	3075	1125	349	38	737	3271
Kandechukhi	U.C.Total	14590	13432	28022	38	27875	147	14631	5239	661	818	3760	
	Baid	2679	2322	5001	28	4953	47	2378	977	71	219	687	1450
	Gharo	699	630	1329	35	1328	1	694	273	8	39	226	1240
	Kandechukhi	2150	2102	4252	39	4222	30	2131	832	133	121	578	2468
	Kurkit Rayati	1542	1471	3013	27	2995	18	1492	510	23	44	442	537
	Shinhverho	2982	2809	5791	44	5784	7	3063	1081	205	263	614	2625
Mitho Babar	U.C.Total	13323	12756	26079	41	25869	209	13067	5043	744	874	3426	
	Ahori Jagir	406	388	793	36	793	0	392	129	12	9	108	2061
	Ahori Rayati	178	168	346	22	346	0	178	83	0	4	79	1575
	Dib Tulan	1225	1192	2417	34	2357	60	1192	426	25	243	158	1520
	Dur Mohammad	2360	2361	4722	39	4665	57	2457	991	130	186	675	2307
	Isso Narejo Jagir	1346	1209	2554	35	2534	20	1263	458	73	83	302	423
	Isso Narejo Rayati	169	152	320	27	318	2	146	53	5	0	47	2315
	Khambhin- Nagin	747	669	1416	25	1408	8	744	279	23	44	211	953
	Khanpur	2638	2567	5205	53	5199	6	2703	993	256	141	595	1382
	Kharirkinaro	2422	2323	4746	42	4746	0	2258	937	174	23	740	2475
	Pussia	1830	1727	3557	40	3504	54	1731	693	44	138	511	3232
Parya	U.C.Total	16175	14511	30686	38	30406	280	16473	6020	968	824	4227	
	Bhagna	1946	1773	3720	41	3716	3	1980	680	121	202	358	4459
	Dangar	3123	2870	5993	41	5943	51	3384	1070	236	130	704	3941
	Dogar	4989	4546	9535	26	9392	143	5360	1990	299	208	1483	5329
	Gaberji	3038	2611	5649	37	5586	63	2788	1155	141	135	879	2523
	Pai	915	871	1786	56	1778	8	892	333	69	61	204	1867

	Rahuja	2165	1839	4004	57	3991	13	2067	791	103	88	600	2745
Thalo	U.C.Total	15257	14246	29502	37	28790	712	16033	5533	1044	744	3745	
	Fatehpur	6499	6341	12840	41	12358	483	7100	2489	553	375	1561	2055
	Jakhro	3415	3095	6510	30	6451	59	3285	1304	94	228	982	2240
	Khairpur												
	Nathan Shah	2116	1868	3984	43	3889	95	2151	829	124	91	614	1443
	Jagir												
Total-													
Tehsi(U+R)		249698	234598	484296	34	478005	6292	296988	85929	16657	11990	57281	
Mehar		243036	234336	464230	54	478003	0232	230366	03323	10037	11990	3/201	
Radhan	U.C.Total	14787	14369	29156	49	27797	1359	27797	4318	1400	405	2513	
Thariri Muhabat	U.C.Total	10658	10067	20725	50	20142	584	20142	3789	603	889	2296	
Total-Tehsil		196548	183137	379685	428	377447	2238	196430	70351	9796	10044	50511	
Rural Mehar			103137					130430					
Baledai	U.C.Total	17491	16210	33701	23	33418	283	18396	5579	1198	488	3892	
	Baledai	4521	4225	8747	18	8652	95	5213	1703	608	84	1011	4663
	Bundgahi	805	799	1604	12	1601	3	791	294	17	7	270	1084
	Durbo	1325	1184	2509	9	2474	35	1375	485	39	0	446	2080
	Gungo	2643	2484	5126	27	5068	58	2712	1040	185	72	784	3245
	Kanwjhro	2194	2034	4227	37	4194	34	2148	446	162	57	227	2924
	Kudan	171	178	349	1	349	0	178	70	4	0	65	2130
	Wah Gahi	1651	1508	3159	25	3155	4	1569	149	8	44	96	3660
	Waryaso	4182	3799	7981	28	7924	57	4408	1393	175	224	994	6941
Bali Shah	U.C.Total	14346	13160	27505	34	27432	73	13916	5390	425	1178	3786	
	Belo Bhority	353	322	675	5	675	0	331	97	0	78	19	13790
	Belo Sona Bindi	120	84	204	13	204	0	112	41	0	0	41	2511
	Bhand Mari	804	712	1516	31	1514	2	793	305	0	78	227	3040
	Bhority No 2	525	512	1037	10	1037	0	534	224	1	183	40	1958
	Kothi Khokhar	2421	2259	4681	23	4641	40	2239	896	63	202	631	4737
	Murid Lakhiar	5443	4978	10421	43	10414	7	5221	2070	149	215	1706	2352
	Rap Nari	4678	4292	8970	34	8947	23	4687	1759	213	422	1124	4440
Beto	U.C.Total	15604	14477	30081	35	29811	270	16036	4952	1347	648	2957	

	Beto	3433	3184	6617	37	6481	136	3406	1164	343	181	639	2376
	Ganja Thorha	3284	3062	6346	31	6309	38	3243	1170	45	173	952	3028
	Bothro	3689	3448	7137	26	7130	6	3915	1358	154	96	1108	4050
	Kamalpur	1358	1201	2559	12	2525	35	1333	454	13	21	420	3600
	kandhra	2060	1880	3940	34	3931	8	1957	684	70	76	538	2239
	Nisoi	5507	5127	10634	29	10539	95	5793	1875	250	416	1209	3146
	Patkandi	3155	3064	6219	33	6130	89	3216	1010	197	24	788	3604
	Serri	1478	1433	2911	40	2906	5	1517	656	158	150	348	1736
Faridabad	U.C.Total	14612	13845	28457	27	28355	102	14760	6200	502	1395	4303	
	Bisharat Kachri	1789	1651	3440	21	3432	8	1733	767	131	50	587	1712
	Charo	1961	1802	3763	15	3759	4	1912	813	25	92	696	3426
	Dadh Barani	0	0	0									
	Faridabad	7583	7465	15049	28	14960	89	7990	3484	323	972	2189	2009
	Faridabad Barani	0	0	0									
	Mojhar Barani	1341	1196	2537	19	2536	1	1317	498	1	239	257	6175
	Sadar-Aliwal	1937	1732	3669	41	3669	0	1809	636	21	41	574	3349
Gahi Mahesar	U.C.Total	14290	13332	27622	32	27386	236	14428	5266	1666	938	2662	
	Gahi Mahesar	8115	7843	15957	42	15854	103	8443	3134	1049	640	1445	1553
	Pipri	3047	2550	5597	14	5555	42	3018	967	206	37	725	2854
	Poracho	3127	2939	6066	21	5977	90	2967	1162	411	260	491	2981
Kazi Arif	U.C.Total	16461	15393	31854	23	31713	141	16391	6702	828	869	5005	
	Kamangar	1712	1536	3249	15	3240	8	1629	507	5	49	454	1616
	Khundi	4518	4226	8745	31	8692	53	4493	1878	340	398	1140	3378
	Langhano	2268	2138	4406	18	4376	30	2173	924	60	12	852	2630
	Litan	3124	3059	6183	13	6163	20	3221	1368	116	43	1209	3894
	Manjan	2373	2052	4424	29	4397	27	2211	1017	17	301	699	1971
	Roni	2465	2381	4846	28	4844	2	2664	1009	290	68	651	3212
Khan-Jo-Goth	U.C.Total	14946	13999	28945	22	28886	59	14901	5894	431	967	4495	
	Ghari Jagir	1098	1003	2101	17	2092	9	987	453	20	40	392	800
	Ghari Rayat	197	187	384	37	384	0	228	101	4	74	23	1259
	Gul MoHHamad	1676	1694	3371	26	3370	1	1851	725	54	27	644	2374

	Wah												
	Gunhero	1739	1554	3293	31	3288	5	1752	552	7	45	499	2589
	Humbar	2477	2368	4845	20	4835	9	2446	1020	94	124	802	2014
	Kothisodhari	2474	2344	4819	6	4819	0	2427	916	43	40	832	1950
	Saidpur	2754	2547	5301	24	5300	1	2783	1070	101	422	546	3701
	Ustelo	1492	1215	2707	29	2682	25	1294	653	98	25	530	2327
Kolachi	U.C.Total	14030	13290	27320	32	26954	367	13050	4495	810	531	3154	
	Ambar	2190	2113	4302	24	4292	11	2016	776	69	27	680	2125
	Bhutto	316	310	626	41	625	1	310	121	0	5	116	11400
	Kasiro	5087	4800	9887	33	9690	197	4846	1414	440	92	882	2452
	Kinaro Kakole	2290	2282	4572	26	4526	46	2248	874	110	69	695	1973
	Kolachi	2098	1787	3885	42	3819	66	1677	680	131	94	456	1172
	Lalu Ghari	1479	1468	2947	36	2927	20	1415	395	49	210	136	1343
	Umeddero	570	532	1102	28	1076	26	537	236	13	34	190	1976
Mangwani	U.C.Total	14054	12760	26815	22	26698	117	13801	5433	331	353	4749	
	Bachi Jagir	543	567	1110	18	1107	2	576	253	23	0	230	1159
	Bachi Rayati	106	100	207	12	207	0	104	43	0	0	43	255
	Balko	619	526	1144	8	1136	8	603	237	4	3	230	1520
	CHHalo	2827	2508	5335	23	5330	5	2702	984	76	102	806	2392
	Dakhani	561	558	1119	9	1107	12	574	228	1	7	219	1615
	Dhadhar	1686	1572	3258	10	3234	24	1851	753	1	17	735	2096
	Lakhiari	3940	3535	7475	29	7443	32	3605	1456	106	109	1242	2365
Nao Goth	U.C.Total	13905	12772	26677	41	26537	139	13543	5128	347	712	4069	
	Abad	712	629	1341	13	1341	0	583	209	0	0	209	5020
	Abad 2/3	557	436	994	3	982	12	448	194	0	193	1	2262
	Mangsi (Mangi)	4276	4162	8438	53	8344	94	4292	1537	101	234	1202	2660
	Nao Goth	6183	5609	11792	40	11760	32	6113	2385	147	219	2019	3700
	Nirah	2175	1936	4110	37	4108	2	2106	802	98	65	638	3236
Radhan	U.C.Total	4550	3979	8529	27	8500	28	4395	1169	77	88	1004	
	Radhan (Rural)	4550	3979	8529	27	8500	28	4395	1169	77	88	1004	2580
Shah Panjo	U.C.Total	15460	14713	30173	41	30045	127	15578	4917	601	707	3609	
-	Kario Kasim Shah	165	134	299	24	299	0	158	66	8	0	58	2463

	Nari	4986	5070	10057	27	9992	64	5047	1492	53	107	1332	4651
	Peroz Shah	3838	3474	7312	52	7303	8	3633	1269	140	304	825	2407
	Shah Panjo	6472	6036	12507	45	12454	54	6741	2088	400	295	1393	2932
Thariri Muhabat	U.C.Total	9552	9051	18603	40	18546	57	9503	3191	389	387	2415	
	Butt Serai	2565	2494	5059	47	5035	24	2530	795	73	112	611	1894
	Keriro	3046	2873	5920	27	5902	18	3224	1146	45	237	863	3216
	Thariri Muhabat	3941	3684	7625	46	7611	14	3749	1250	271	39	940	2799

## **Annex: 8 - List of Villages Disaster Management Committees**

District Dadu	Taluka	Khairpur Nathan Shah
---------------	--------	----------------------

S#	Village Name	No. of Households	Population	Name of Minor	Union Council	Contact Person	Contact Number
1	Haji Ahmed Khan Khoso	45	250	Rice Canal	Chor Qamber	Ahmed Khan Khoso	0342-3131967
2	Jaro Khan Panhwar	38	250	Nara	Ghozo	Javed Ahmed	0346-3638640
3	Raees Sultan Khan Gadahi	100	700	Nara	Ghozo	Gulam Hussain	0342-3997748
4	Chupar khan	210	2326	Nara	Ghozo	Noor Mohammad	0345-0149732
5	Fateh Khan Gadihi	100	500	Nara	Ghozo	Muhammad Hassan	0301-3493464
6	Khush Halani	235	3000	Nara	Ghozo	Muhammad Yaqoob	0300-3256486
7	Mewo Chandio	400	1250	Rice Canal	Chor Qamber	Abdul Majeed	0341-3136203
8	Sahib Khan Khoso	170	1300	Rice Canal	Chor Qamber	Muhammad Bux Khoso	0336-3128048
9	Hoori	65	663	Rice Canal	Chor Qamber	Ghulam Shabir	0342-3353769
10	Chiga Pur	300	1900	Rice Canal	Chor Qamber		
11	Lal Bux Wadha	220	1200	Rice Canal	Chor Qamber	Ahmed Khan Wadha	0302-3274302
12	Panjani Chandio	45	350	Nara	Ghozo	Barkat Ali	0347-3007454
13	Maano Khan Chandio	380	3000	Rice Canal	Chor Qamber	Fahmida Chandio	0341-3769601
14	Bahadurpur	200	800	Rice Canal	Chor Qamber	Asad Ali	0341-3343581
15	Sohrab Khan Bughio	90	880	Rice Canal	Chor Qamber	Abdul Gafoor Bhugio	0342-2261956
16	Chor Qambar	280	1400	Rice Canal	Chor Qamber	Toffique Ali Khoro	0302-3015651
17	Gul Bungh	123	760	Nara	Ghozo	Bashir Ahmed	0345-3832220
18	Sher Muhammd Gadahi	400	3300	Nara	Ghozo	Nizakat Gadahi	0344-3184844
19	Haji Jam Muhammad Korejo	200	1400	Nara	Ghozo	Wazeer Ali	0342-3992588
20	Nangin	100	650	Khuda wha	Kandai Chukhy	Shaman	0300-4322344
21	Derya Khan Khoso	250	1750	Nara	Ghozo	jabbar Ahmed	0347-3444663
22	Nandhi Chobar	70	490	Nara	Ghozo	Mushtaque ahmed	0347-1378247

23	Gul Muhammad Chutto	71	750	Nara	Ghozo	Zulfiqar Ali	0341-3577607
24	Ghulam Ali Gadahi	40	320	Nara	Ghozo	Ali Akbar	0300-0400939
25	Kurkat	100	700	Nara	Kandai Chukhy	Ali Sher Mallah	0341-2083969
26	Murad Khan Gadahi	180	1260	Nara	Kandai Chukhy	Zubair Ahmed	0347-3630239
27	Bajhi khan Babbar	70	500	Nara	Kandai Chukhy	Hamid Ali	0306-8587194
28	Chobar Wadi	450	3150	Nara	Gazo	Hyder Ali	0345-3578836
29	Rehaan Ghadhai	40	320	Nara	Kandai Chukhy	Ali Akbar	0343-3743108
30	Abdullah Khoso	120	840	Nara	Ghozo	Ghulam Abbas	0343-8330912
31	Rasool Bux Buriro	60	450	Nara	Ghozo	Mohammad khan	0344-2010088
32	Dhalije Mayani	56	400	Nara	Ghozo	Noor Mohammad	0342-3132334
33	Haji Lal Bux Rahoja	60	480	Nara	Ghozo	fahad Ahmed	0345-6100107
34	Kandai Chukhy	300	1200	Nara	Kandai Chukhi	Shahjahan mallah	0346-3639641
35	Mangria Machi	50	350	Nara	Kandai Chukhi	Abdul Haque	0342-3773665
36	Arzi Naich	160	1000	Khuda waah	Kandai Chukhi	Mumtaz Ali	0301-3565357
37	Khair Muhammad Chandio	50	500	Nara	Kandai Chukhi	Abdul Rehman	0304-3820855
38	Reejhpur	250	1500	Khuda waah	Kandai Chukhi	Gulzar Ahmed	0300-3396445
39	Sattar Dino Depar	80	570	Khuda waah	Kandai Chukhi	Ayaz Ali	0303-3530030
40	Peroze Khan Chandio	50	350	Khuda waah	Kandai Chukhi	Abdul jabbar	0344-1381788
41	Lol Ja	350	2100	Khuda waah	Kandai Chukhi	Abid Hussain	0345-8072904
42	Kumb	200	1600	Nara	Mitho Babar	Raza Mohammad	0300-3250718
43	Rasool Bux Gachal	65	460	Nara	Kandai Chukhi	Haji Wazeer	0344-8072547
44	Mano Khan Gadhai	100	600	Nara	Kandai Chukhi	Ghulam Rasool	0302-3253542
45	Bero Khan Gadhai	400	2850	Nara	Kandai Chukhi	irfan Ali	0345-1353459
46	Jhando Khan Gadhai	250	1750	Nara	Kandai Chukhi	Mashooq gadahi	0306-8587976
47	Gharo	225	960	Nara	Kandai Chukhi	Ahmed Khan	0302-2529109
48	Wali Muhammad Laghari	200	2500	Nara	Kandai Chukhi	Shehdad Khan	0301-3494504
49	Kamal Khan Solangi	50	300	Nara	Kandai Chukhi	Abdul jabar solangi	0347-3150183
50	Baid Shareef	250	1880	Nara	Kandai Chukhi	Abdul Hameed	0342-3094762
51	Jamal Khan Laghari	150	800	Khuda Waah	Kandai Chukhi	Ghulam Hussain	0303-2409252

52	Moongri Jo Daro	150	1100	Nara	Kandai Chukhi	Sehiti	0300-3108776
53	Nabi Bux Bhanbhro	70	900	Nara	Kandai Chukhi	Shaman	0341-3507406
54	Aadho Gadhai	100	500	Nara	Kandai Chukhi	Jannat	0304-8715931
55	Golo Dero	80	809	Nara	Kandai Chukhi	Rubina	0343-3580855
56	Jumo Khan khoso	70	350	Nara	Kandai Chukhi	Niaz Hussain Khoso	0344-3248265
57	Muhammad Khan Chandio	40	280	Nara	Kandai Chukhi	Abdul Qadir	0301-0824207
58	Ghulam Hussain Laghari	45	320	Nara	Kandai Chukhi	Jalal Khan	0307-0652080
59	Shahi Laghari	250	1800	Nara	Kandai Chukhi	Liaquat Ali	0344-3806273
60	Muhammad Yousif Bhutto	40	270	Nara	Kandai Chukhi	Ali Asghar Bhutto	0302-1230755

## Annex: 9 List of NGOs in district Dadu

S No	Name Partner Organization	Focal person- Contact numbers	Adress : Postal - email -	Short profile
1	Goth Sudhar Sangat Sindh	Aslam Lakhiar 03443888564	Mahesar House Opposite VIP School Theba Road Mehar Town District Dadu Sindh	Goth Sudhar Sangat Sindh works in Health, Education , Political Education, Climate change and other sectors.
2	Village Shadabad Organization	Zulfiqar Birhamani 03337073915	Office at Johi	Education, DRM
3	Soceity for the people education for environment (SPEED)	Mr. Ubaid Lakhiar 03003093627	2nd floor Sahar house, Opposite national bank main road Mehar	Society for the people educatioon for environment Development has recently changed its name to Society Peoples Educatioon ED, working on different projects with the support of TVO, USAID and other donors.
4	Sujjag Sansar Organization	Mashooque Birhamani 03003024563	Taluka Johi, District Dadu	Working on awareness of communities on different human rights aspects through theaters and media interaction.
5	NARI Development Organization	Azra Memon 03443230519	Office at Johi	Working for women rights, highlighting women issues and awareness about their rights
6	Gorakh Foundation	Zaman Ahmed Bhatti 03003080361	House No. 88, Block-D, Housing Society near TB Hospital Dadu	work with poor and deprived communities to eradicate poverty, illiteracy, food insecurity through systematic management of climate change adaptation and strengthen local leadership
7	HEAD Organiztion	Abdul Rehman Chandio 03023250085	HEAD Office main road, Shahbaz Colony K.N Shah	HEAD Organization is working in different areas of KN Shah focussing on Disaster Risk Reduction, Health and education.
8	Local Support Organization	Manzoor Hussain 03433851125	PO Ghozo Taluka KN Shah	Working on awareness of communities on different sectors including health and hygiene.

9	Lahori Real Development Organization	Abdul Aziz 03466365351	Village Lahori, UC Burira K.N Shah	The organization having 260 members working at UC level and a member of DMC at UC level. Having good experience of DRR.
10	Mashal Development Organization	Mukhtiar Chandio 03008968323	Mashal Office Main Road K.N Shah	Working on awarness of people on environment, education, agriculture and other sectors.
11	Chandia Welfare Association	Azam Chandio 03003251517	Office at K.N Shah	Working for awareness of people in education, health, DRR and other sectors.
12	Reformist's Social Welfare Organization	Nissar Shah 03013534490	Office at main bazzar road, K.N Shah	Reformist's Social Welfare Organization (RSWO) is a non government, non profit, non political and development oriented organization, operational in Sindh, Pakistan. Reformist's Social welfare Organization has been designing and implementing community driven innovative approaches to development. RSWO strongly believes in community participation as a key factor in the development. It is strongly committed towards the wellbeing of the communities surrounded by the widespread ignorance, poverty, multiple social backwardness, financial, Health, Human Rights and educational problems.