PAKISTAN EMERGENCY SITUATIONAL ANALYSIS

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A PROFILE OF

DISTRICT UMERKOT

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Umarkot Fort
District Umarkot, Sindh

"Disaster risk reduction has been a part of USAID's work for decades. .....we strive to do so in ways that better assess the threat of hazards, reduce losses, and ultimately protect and save more people during the next disaster."

Kasey Channell,

Acting Director of the Disaster Response and Mitigation Division of USAID's Office of U.S. Foreign Disaster Assistance (OFDA)

PAKISTAN EMERGENCY SITUATIONAL ANALYSIS

District Umerkot

June 2014

"Disasters can be seen as often as predictable events, requiring forward planning which is integrated in to broader development programs."

Helen Clark, UNDP Administrator, Bureau of Crisis Prevention and Recovery. Annual Report 2011

Disclaimer

iMMAP Pakistan is pleased to publish this district profile. The purpose of this profile is to promote public awareness, welfare, and safety while providing community and other related stakeholders, access to vital information for enhancing their disaster mitigation and response efforts.

While iMMAP team has tried its best to provide proper source of information and ensure consistency in analyses within the given time limits; iMMAP shall not be held responsible for any inaccuracies that may be encountered. In any situation where the Official Public Records differs from the information provided in this district profile, the Official Public Records should take as precedence.

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NOTE:

This district profile is a live document and it will continue to improve based on its users feedback and upon availability of more accurate and authenticated sources as and when they become available. It's not always possible to publish these profiles in hardcopy format; however iMMAP will ensure that these updates are made available on DRR Pakistan Information Management Portal. For updated version of following profile, please visit www.drrpakistan.pk/pesa.

Any questions/ comments concerning information presented in this report can be addressed to:

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Credits

iMMAP has been providing Information Management [IM] and Disaster Risk Reduction [DRR] capacity building services in Pakistan since 2010. Based on our lessons learned, while interacting with thousands of humanitarian partners and government officials, both national and international; we believe that the following are 7 basic requirements to improve Disaster Response and Management life cycle:

1. Information Management [IM] is a must for effective disaster response and monitoring;
2. Coordination among all stakeholders [both national and international] is of utmost importance to reduce redundancy and duplication in such critical situations – going beyond clusters and getting connected with local community representatives;
3. Appropriate logistic arrangements are critical for humanitarian relief and mitigation. However, it must be born in mind that logistic requirements drastically vary from disaster to disaster, based on its time, geography, and nature;
4. Disasters and Development are intimately connected. Its important that all disaster responders are aware of the long term implications of their actions of relief and early recovery;
5. It is important that we, as disaster responders, take full responsibility of self-accountability and transparency not only to the satisfaction of the government officials but the general public as well. Not-for-profit sector must be driven by a cause!
6. National, Regional, and International Public/ Private Partnerships [PPP] is the only way to implement sustainable Disaster Risk Management [DRM] measures;
7. Media must be integrated in our response efforts. This vastly helps to disseminate the right information, minimize duplication of efforts, and make all stakeholders aware of your organization's input/activities.

Pakistan Emergency Situation Analysis [PESA] is a series of District Profiles (DP), which is developed with the above-mentioned 7 basic requirements in focus. PESA DPs are one of the most effective iMMAP IM services in Pakistan, which directly contribute to thousands of humanitarian relief providers' effective emergency response and disaster management.

I can not conclude this note without thanking iMMAP Pakistan team that has contributed tirelessly, under extreme emergency pressure, to consistently deliver their best on time, during the 2010, 2011, 2012, and 2013 floods, 2013 earthquake in Balochistan, and the most recent drought emergency in Tharparkar, Sindh during 2014.

I particularly wish to express my great appreciation and thanks to my mentors, colleagues, and friends Mr. Fayyaz Ali Khan and Ms. Kathrin Lauer for their continuous feedback and reflection on the profiles quality. At many times, I parked their feedback, due to the time constraints of the service we have been trying to deliver. However, their feedback have always been valued and appreciated. Mr. Naeem Ahmad, being the M&E professional, has proven himself to be a gem for iMMAP. I also appreciate the efforts of other staff members who have been with us in the past and many new faces that joined iMMAP recently for their work with an exceptional dedication. This includes: Farooq Laghari, Qassim Jan, Sumbal Kazmi, Salman Mulk, Zohaib Fazal, Hadya Ali, Dr. Ahmad Ali Malik, Fatima Gillani, Fatima Ali, Laraib Malik, Zeeshan Ahmad, Sarfaraz Meher Din, Muhammad Javed Iqbal, Muneeb Muzamil, Mahwish Muzamil, Tariq Sardar, Wajid Ali, and last but not the least Nouman Ali, our amazingly skilled graphic designer.

Mehdi Bokhari
PESA Project Director

Foreword

Timely response to a disaster may save precious human lives and reduce economic costs. However, natural disasters, typically, occur unexpectedly. Consequently, in most cases, the afflicted population lacks the necessary tools and capacity to handle such tragic occurrences and the devastation is manifold more than it should be.

“Before the next disaster hits, now is the time to recommit to making smart investments that save lives, property, and money. Whether at home or abroad, measures to improve response, increase disaster management capacity, plan and prepare, can have dramatic dividends.” (Kasey Channell: Acting Director of the Disaster Response Team for USAID’s Office of U.S. Foreign Disaster Assistance.) It is so true, as preparation for unexpected calamities is a tough task. However, if certain precautions are taken, they might lessen the overall damage. This series of district profiles, prepared by iMMAP and funded by USAID, is one such effort to enhance Government of Pakistan, humanitarian organizations and all other stakeholders’ efforts towards rapid needs assessment, disaster response and mitigation.

These profiles are divided into four sections namely background information, disaster history and its impact, hazard vulnerability and capacity assessment (HVCA) and coordination and support services.Background information provides an overview of history, geography, culture, and communication infrastructure. It also provides detailed analyses of demography, livelihood, food security, health and education. The second section provides detailed history of disasters in the district; information about losses and damages; and gap analyses of above mentioned sectors. HVCA section provides detailed analyses of district hazards, vulnerabilities and capacities that exist in the local community. Coordination and support services section gives information on whom to contact in emergency/disaster situations. The motivation stems from the idea that at the time of disaster all the stakeholders in general and the donors and disaster managers in particular can have a fair idea of what to expect and how to prepare for. It is expected that this contribution of USAID and iMMAP would lead to a well-coordinated and coherent response by different humanitarian organizations on managing similar disasters.

Having stated the above, it is very candidly admitted that these profiles are by no means exhaustive and in fact require a lot more input to qualify these as good enough documents for disaster preparedness. However, these are live documents and would be improved upon as and when required. There appears to be an element of repetition, which is owed to the fact that while these documents depict the district profiles in normal circumstances, the same then provide a detail account of the impact of the 2010/2011 floods, the assistance provided by the government and the humanitarian organizations and the remaining gaps. Due to time and resources constraints, the information provided in these profiles is mainly base on secondary source data. Depending on the end users’ response and funding availability, this exercise would be extended to other districts of the country.

Major (Retd) Tahir Iqbal
iMMAP Pakistan
Chairman

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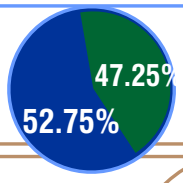
DISTRICT UMERKOT
AT A GLANCE

Population 1998 **663,095 persons**

Population Density
193 per Sq. Km

3.28%
Average Annual Growth Rate (1981 - 98)

Male
349,754



Female
313,341

Average **5.4**
Household Size

Sex Ratio **112**
Males per 100 females

Population 2013
1,084,451 Persons

Area
5,608
Sq. Kms

Housing
Total Housing Units
(1998)

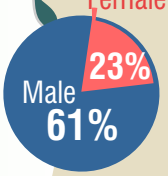
112,335

Pacca Housing Units	15,945 (13.03 %)
Housing Units having Electricity	47,857 (39.12 %)
Housing Units having Piped Water	14,797 (12.09 %)
Housing Units using Gas for Cooking	734 (0.59 %)

111,464
16.81%
Urban Population

551,631
83.19%
Rural Population

Health & Education



Number of Health Facilities
40

Number of Educational Facilities
2,329

Literacy Rate (10+)
44%
2010-11

Administrative Units

Taluka	4
Union Councils	27
Mouzas	235

Infant Mortality Rate
81/1,000 Live Births

Under 5 Mortality Rate
101/1,000 Live Births

Maternal Mortality Ratio
314/100,000 Live Births

Registered Voters
385,505

Electoral Representation

Male	203,277
Female	182,228
National Assembly Seat: 1	(NA-228)
Provincial Assembly Seat: 3	(PS-68, PS-69, PS-70)

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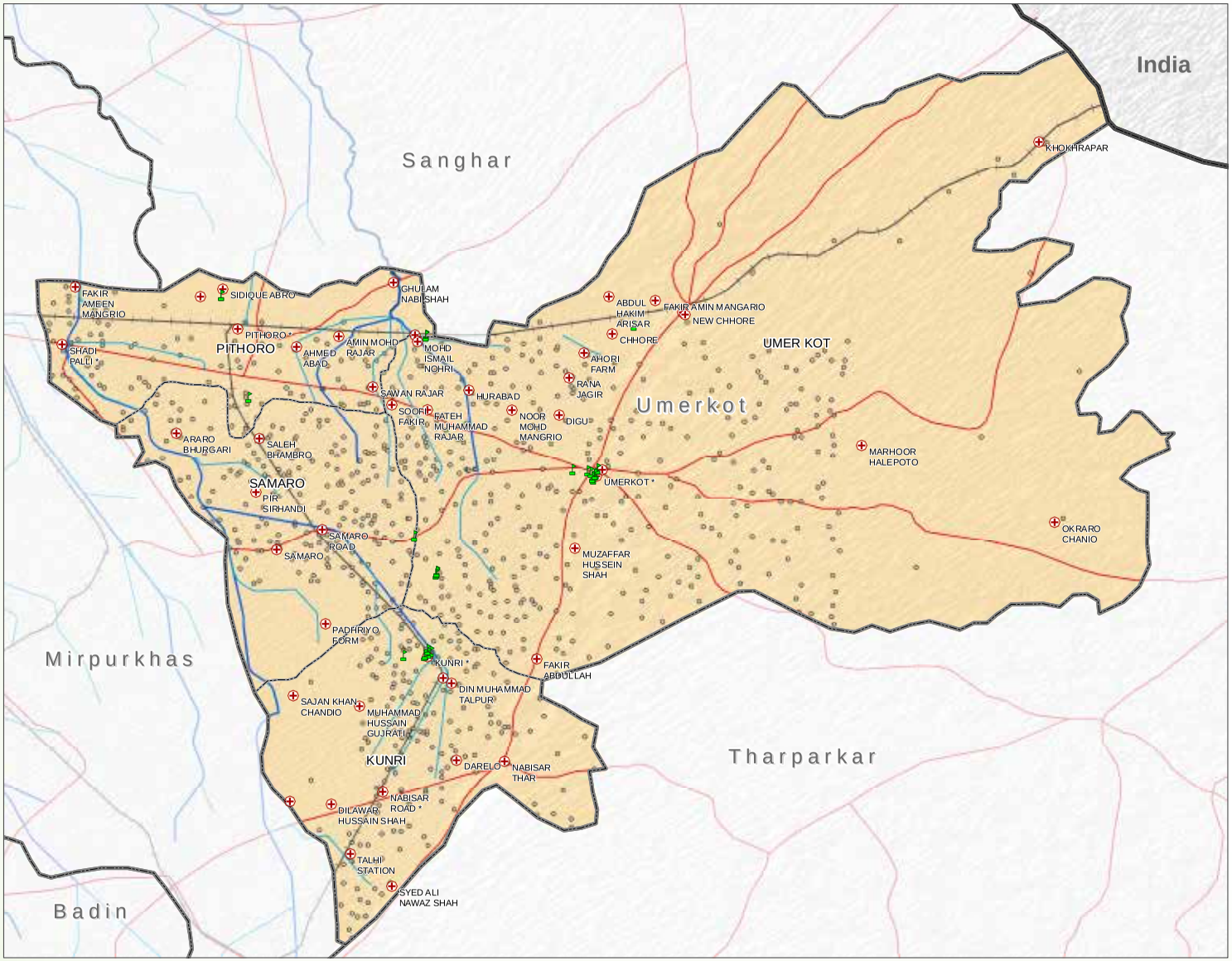
Umerkot - Reference Map

May, 2014



Legend

- Education Facilities
- Settlements
- Health Facilities
- Roads
- Railway

Irrigation System

- Canal
- Branch
- Distry
- International boundary
- Province boundary
- District boundary
- Taluka boundary

IMMAP

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Map Doc Name:
iMMAP_PAK_Umerkot RefMap_v02_052714

Creation Date: May 27, 2014
Projection/Datum: WGS84
Web Resources: http://www.immap.org

0 5 10 20 Kilometers

Map data source(s):
Alhassan Systems Private Limited : Admin boundaries, Education Facilities
National Geospatial Agency : Settlements
Logistic Cluster-WFP: Roads, Railway
World Health Organization : Health Facilities
Sindh Irrigation and Drainage Authority (SIDA): Canals

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Abbreviations

ACO	Agriculture Census Organization
BHU	Basic Health Unit
CD/GD	Civil Dispensary/Government Dispensary
CFW	Cash For Work
DCR	District Census Report
DDRMP	District Disaster Risk Management Plan
ECP	Election Commission of Pakistan
FAO	Food and Agricultural Organization
GER	Gross Enrolment Rate
GOS	Government of Sindh
HH	Household
NADRA	National Database and Registration Authority
NDMA	National Disaster Management Authority
NDP	National Drainage Program
NER	Net Enrolment Rate
NFIs	Non-Food Items
NGO	Non-Governmental Organization
NHA	National Highway Authority
PBS	Pakistan Bureau of Statistics
PCO	Population Census Organization
PDMA	Provincial Disaster Management Authority
PLW	Pregnant and Lactating Women
PSLM	Pakistan Social and Living Standard Measurement Survey
RHC	Rural Health Centre
RSU	Reform Support Unit
SDPI	Sustainable Development Policy Institute
SMCs	School Member Committees
SUPARCO	Space and Upper Atmosphere Research Commission
TRF	Technical Resource Facility
UC	Union Council
UNICEF	United Nations Children's Fund
UNOCHA	United Nations Office for the Coordination of Humanitarian Affairs
WFP	World Food Program
WHO	World Health Organization

1 Background Information

1.1. Introduction

1.1.1. History

District Umerkot is a historically important administrative unit that plays an important role in the economy and trade of eastern Sindh. Formerly known as Amarkot, it was the capital of Greater Sindh Province, including some parts of present day's Rajasthan state of India. It became prominent during the time of the Mughals. The Mughal king Akbar was born in Umerkot, on 14 October 1542, when his father Humayun was on the run, after military defeat at the hands of Sher Shah Suri. Rana Prasad, a Hindu Sodha Rajput, ruler of Amarkot, gave refuge to Humayun. Later, the Mughal Emperor Akbar, a popular figure with both Hindus and Muslims, became the ruler of India (*Hind*)[2].

Later on, the region was ruled by different dynasties, including the Kalhoras (1657-1783) and the Talpurs (1783-1843). When Britain invaded the subcontinent, General Charles Napier, a commander in the British Army, defeated the Talpur dynasty and conquered Sindh in 1843[3]. The British contributed in a number of ways towards the development of Sindh. General Charles Napier was appointed as the first Governor General of Sindh. The province was divided into different administrative units and assigned to *Zamindars* (landlords) to collect taxes for the British government. The British government developed these areas as urban centers. Consequently, people migrated from other districts and provinces as well and started to reside here. The British named these small developed areas as "Talukas".

Umerkot has many sites of historical significance such as the Mughal emperor Akbar's birthplace at Umerkot Fort. Rana Chandra Singh (1931–2009) was the *Rana* of the former Amarkot *Jagir* after 1947, and was elected as a member of the National assembly many times and also served as a federal minister. Umerkot was part of district Mirpur Khas till its establishment as a district, in April, 1993. But later on it was abolished and merged back with district Mirpur Khas in 2000. However, it was again revived in 2004, with the same jurisdiction[4].

1.1.2. Geography

District Umerkot lies in 690 10' 08" to 700 19' 44" east longitudes and 240 52' 54" to 250 47' 59" north latitudes. This district is bounded by Tharparkar on the east and south, district Sanghar and India on the north and district Badin on the west. The district is divided into two distinct regions i.e.,

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[2] Profile of District Umerkot, 2009, South Asia Partnership Pakistan, (http://www.sappk.org/sites/default/files/publications/profiles/Profile_Umerkot.pdf) accessed on 10/06/2013

[3] Government of Sindh, (http://www.sindh.gov.pk/dpt/history%20of%20sindh/history.htm) accessed on 10/06/2013

[4] Drought Situation Assessment of Thar Desert of Umerkot, 2008-09, Pulished by Sami Samaj SuJag Sangat, Umerkot

the eastern part and the western part. The eastern half of the district, which comprises of the taluka Umerkot, basically comprises of Thar Desert. This region is distinguished by its low and erratic rainfall, high atmospheric aridity, abundant sunshine and heat, strong dust-raising winds and sparse vegetation cover. High sand dunes and sandy plains cover 70% of its surface. However, the region is gifted with a large variety of natural vegetation, there being over seven hundred species of grasses, shrubs and trees. The perennial amongst these are very hardy, and tenacious enough to withstand extended drought, efficient builders of biomass and yet nutritious as a feed.

The western part of the district is relatively fertile with green lands and a proper irrigation system. This western part of the district comprises of the three talukas of Pitharo, Sumaro and Kunri, though some parts of Umerkot taluka are also included in this region.

The district has extreme climate in both the portions, which differs considerably. In the irrigated portion, the climate is temperate, being neither extremely hot in summers nor very cold in winters as compared to the eastern desert area. The summer heat is considerably reduced by almost constant blowing of the south western breeze from the sea. The eastern portion of the desert area has a tropical climate being more hot and dry, but receives comparatively more rains during monsoon. April, May and June are the hottest months. The mean maximum and minimum temperatures during this period are 41°C and 24°C respectively. December, January and February are the coldest months. The mean maximum and minimum temperatures during this period are 28°C and 9°C respectively. Rainfall varies from year to year. Most of the rain falls in the monsoon months between June and September. The winter rains are very rare[5].

1.1.3. Culture (Ethnicity, Religion and Politics)

Umerkot has a rich traditional Sindhi culture. Women usually wear Shalwar Qameez but quite often dress in the traditional attire, Ghaghra or Parro as well. Traditionally, women wear bangles. Men usually wear a Shalwar Qameez distinguished by broader bottoms, and a traditional Sindhi style cap.

Sindhi is mother tongue of the majority, spoken by 90% of the total population in the district. It is predominant in rural areas at 93% as compared to 71% in urban areas. The next prominent faction is of Punjabi speakers at 5%. Marwari and Thari are also common language of this district.

Umerkot is the only district in Pakistan with around half of the total population being non- Muslim. 52% of the population is Muslim while 48% of the people are Hindus and scheduled castes. Hindus and scheduled castes are concentrated in rural areas while Muslims reside in the urban areas. Hindus constitute almost half of the district's population and the dominant race among them is That of Sodha Rajputs. They claim to be of 'pure rajput' origin and are called Thakurs. Other castes of Hindus living in this area include Brahmans, Lohanas (an Indo-Aryan ethnic group mostly living in Indian Gujrat and associated with business), Kohlis (belonging to Khatri sub- caste), Bheels, Sutars and others.

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[5] Profile of District Umerkot, 2009, South Asia Partnership Pakistan, (http://www.sappk.org/sites/default/files/publications/profiles/Profile_Umerkot.pdf) accessed on 10/06/2013

Pakistan People Party (PPP) is the most popular party in the district and, over the years, candidates of PPP have been successful in almost all of the elections. This district is represented by one national assembly and three provincial assembly seats. In the last general election of 2013, PPP won all the seats of the national and provincial assemblies[6].

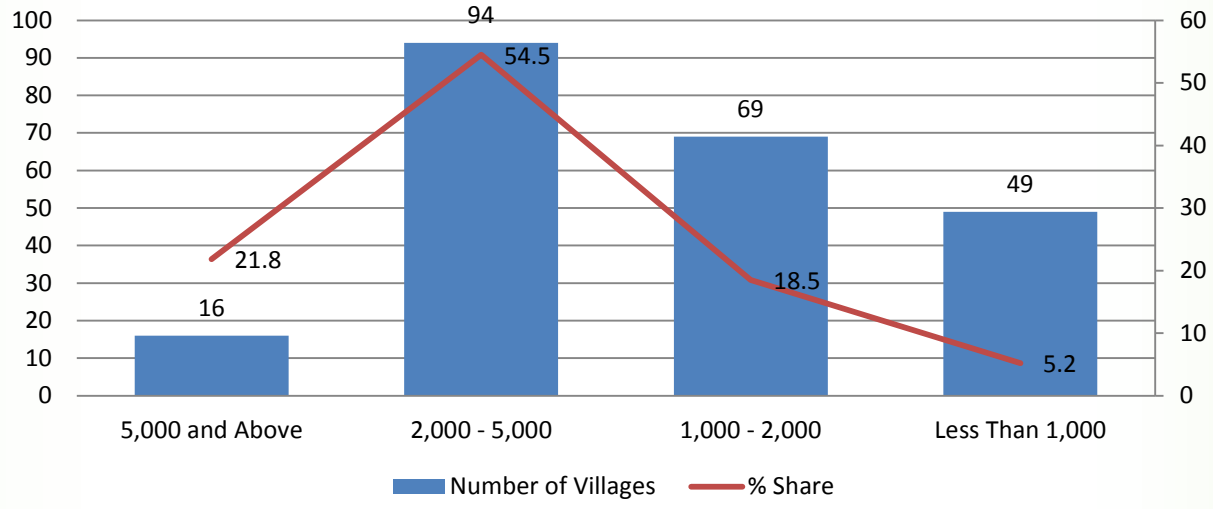
1.1.4. Administrative Division

District Umerkot has its district headquarters at Umerkot city. This district has four talukas, named: Umerkot, Samaro, Kunri and Pitharo. It has 27 union councils and 235 mouzas (revenue village). Out of these mouzas, 215 are rural, 3 are urban and 17 are partly urban.

Table 1.1.1: Administrative Division of District Umerkot

Umerkot	Kanungo Circles/ Supervisory Tapas	Patwar Circles/ Tapas	Number of Mouzas					
			Total	Rural	Urban	Partly urban	Forest	Un-populated
Umerkot	12	72	235	215	3	17	-	-
Umerkot	3	27	90	82	-	8	-	-
Samaro	3	17	59	58	-	1	-	-
Kunri	3	17	38	32	3	3	-	-
Pithoro	3	17	48	43	-	5	-	-

Major towns of the district are Umerkot, Kunri, Dhoronard, Chhore Old, Samarao, Pithoro, Nabisar and Shadipali. The following chart categorises number of villages according to population and their share[7].



[6] Election Commission of Pakistan (http://ecp.gov.pk/NA-Pakistan%28Detail%29.pdf) accessed on 10/06/2013
[7] A Profile of District Umerkot 2009, South Asia Partnership Pakistan

1.1.5. Road Network Infrastructure

Road network is considered as a vehicle for economic development and social change. Efficient road network not only develops a quick and efficient transportation system but also opens up new areas hitherto remained closed. It brings about social integration among rural and urban segments and greatly assists in providing access to basic needs such as education and health facilities, etc. It brings rural areas in constant touch with urban segments of a society and creates better understanding necessary for social change and political awareness.

Umerkot district covers an area of 5,608 sq. kms yet it has only 631 kilometers of good quality roads, which are inadequate for the area and its population[8]. A provincial highway connects Umerkot with rest of the districts of Sindh through Mirpur Khas. This district also hosts the famous Khokhrapar border of Pakistan with India. The district headquarter of Umerkot is linked with its taluka headquarters of Pitharo, Kunri and Sumaro through metaled roads.

1.1.6. Irrigation

Umerkot lies in a drought / arid zone where annual rainfall is less than 40mm, and the district is at the tail end of Nara Canal command Area. Main canals of the district are Nara Canal and Mithrao Canal[9]. All of these are perennial canals but due to shortage of water there is a rotation system which provides weekly turns on Distributeries / Minors. The eastern Nara Canal is the demarcation line between irrigated and desert areas. The district consists of 27 Union Councils out of them 7 union councils constitute desert portion of the district. The topography of the district has two distinct portions, the irrigated area in the west and north and the desert area with sandy dunes covered with thorny bushes in the east and south. Some villages have water storage facilities but mostly villagers are dependent on canal water. Villagers are not in a position to build large ponds to store and pump irrigation water, so that acreage of cultivation can be increased. On average, farmers receive canal water once a month for irrigation purposes.

The region is distinguished by its low and erratic rainfall, high atmospheric aridity, abundant sunshine and heat; strong dust-raising winds and sparse vegetation cover. High sand dunes and sandy plains cover 70% of its surface. Umerkot district is mostly a rain fed area. In Thar Desert of Umerkot, the monsoon season starts from 2nd week of June and continues till the end of September. The mean annual rainfall over Thar desert, in a good year, ranges between 200-250 millimeters and nearly 93% of the rain fall comes in the form of few spells confined to the monsoon season that last for 65-75 days. If rains do not fall during this period, a drought like situation emerges, resulting in acute shortage of food and fodder[10].In the year 2008-09, out of the net sown area, 89% was irrigated through canals and in 2009-10 it reduced to 82%. The table below gives information regarding irrigation in Umerkot.

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[8] Sindh Development Statistics, (2008), Lahore University of Management Sciences (LUMS), pp.262

[9]

[10] Drought Situation Assessment Of Thar Desert Of Umerkot, 2008-09

Table 1.1.2: Irrigation by Type

	Area in Hectares	
Irrigation Type	2008-09	2009-10
Canal	85,834	72,972
Tube well	7,120	7,042
	92,954	80,014
Un-Irrigated	11,021	17,905
	103,975	97,919

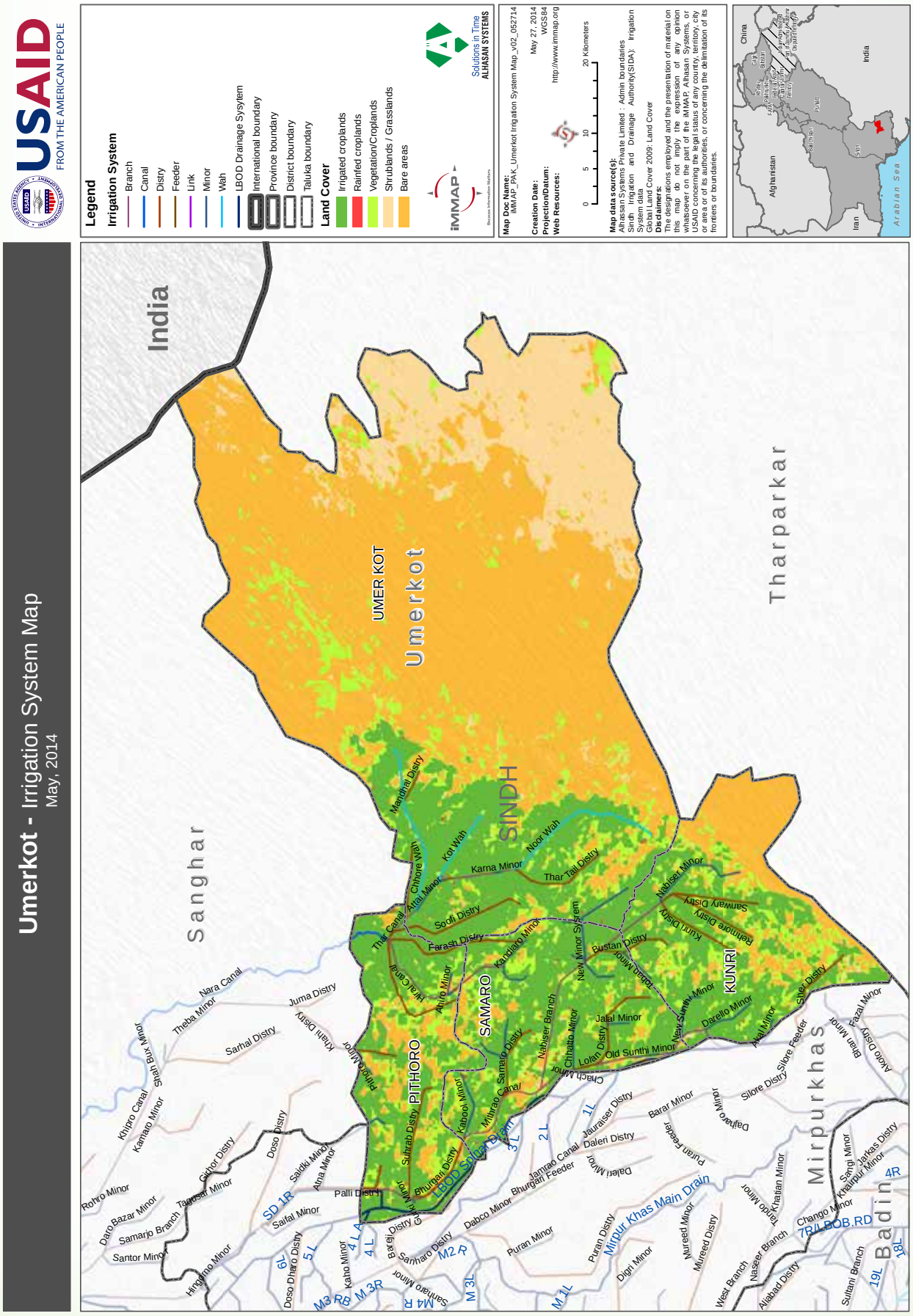
Sindh Development Statistics 2011

As the table 1.1.3 shows, majority of the mouzas are irrigated through canals. Out of the 232 rural mouzas, 205 (88%) are irrigated with the help of canals and 28 (12%) are arid (barani) mouzas.

Table 1.1.3: Mouzas Reporting Sources of Irrigation

ADMINISTRATIVE UNIT		RURAL POPULATED MOUZAS	NUMBERS OF MOUZAS REPORTING SOURCE OF IRRIGATION						
			Canal	RIVER	TUBEWELL / WELL	RAVINE	SPRING/ STREAM/ KAREZ	ARID (BARANI)	FLOODING
Umerkot District	Number	232	205	-	4	-	-	28	-
	Percent	100	88	-	2	-		12	
Umerkot Taluka	Number	90	63	-	3	-	-	28	-
	Percent	100	70	-	3	-		31	
Samaro Taluka	Number	59	59	-	-	-	-	-	-
	Percent	100	100	-	-	-			
Kunri Taluka	Number	35	35	-	1	-	-	-	-
	Percent	100	100	-	3	-			
Pithoro Taluka	Number	48	48	-	-	-	-	-	-
	Percent	100	100	-	-	-			

Source: Mouza Statistics of Sindh 2008, Agriculture Census Organization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FROM THE AMERICAN PEOPLE
Umerkot - Irrigation System Map
May, 2014
Legend
Irrigation System
Branch
Canal
Distry
Feeder
Link
Minor
Wah
LBOD Drainage Sysytem
International boundary
Province boundary
District boundary
Taluka boundary
Land Cover
Irrigated croplands
Rainfed croplands
Vegetation/Croplands
Shrublands / Grasslands
Bare areas
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Solutions in Time
ALHASAN SYSTEMS
Map Doc Name:
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Creation Date:
May 27, 2014
Projection/Datum:
WGS84
Web Resources:
http://www.immap.org
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Map data source(s):
Alhasan Systems Private Limited : Admin boundaries
Sindh Irrigation and Drainage Authority(SIDA): Irrigation System data
Global Land Cover 2009: Land Cover
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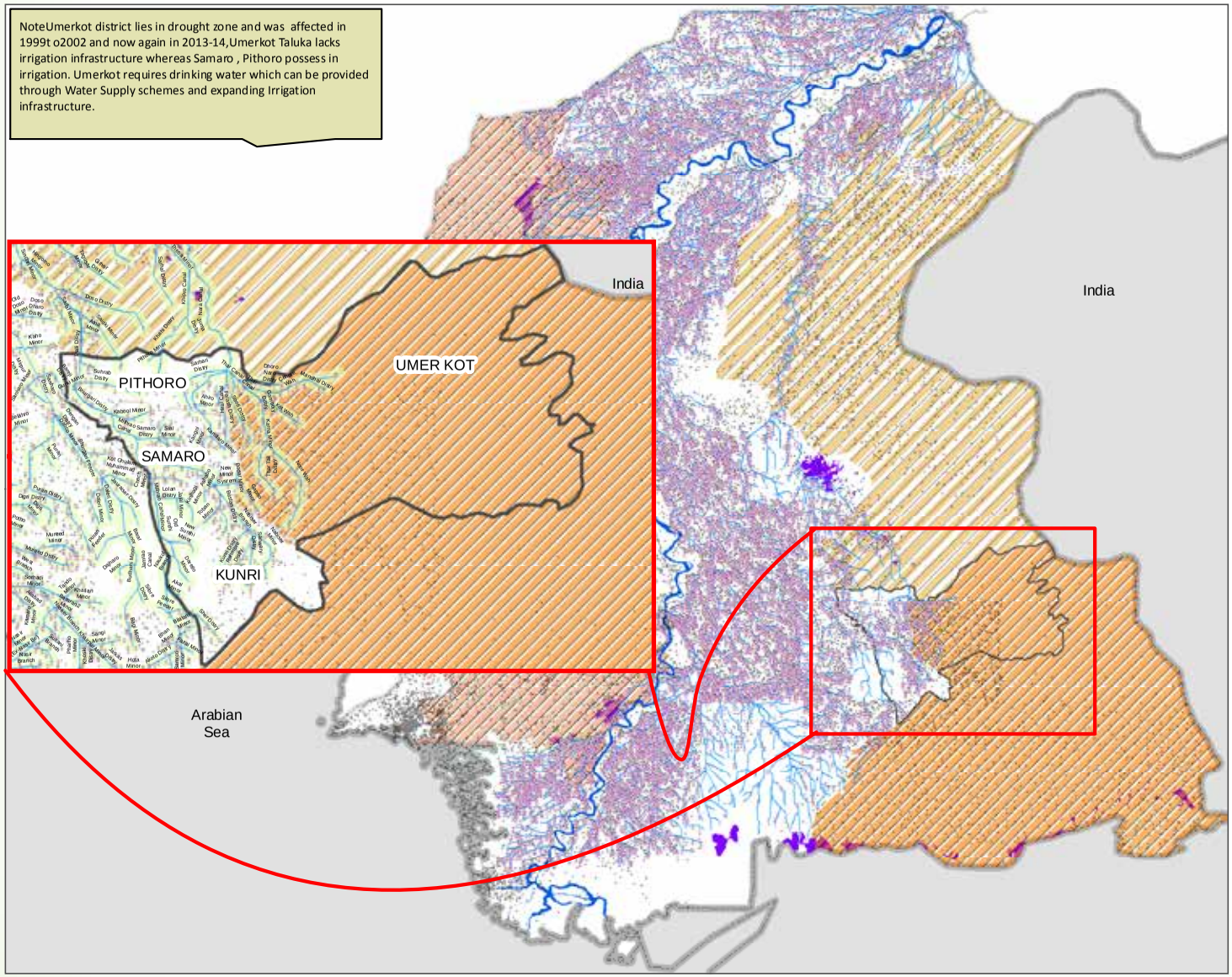
China
India
Afghanistan
Iran
Arabian Sea
India
Sangha r
Umerkot
Tharparkar
Mirpurkhas
Badin
UMER KOT
SINDH
SAMARO
PITHORO
KUNRI
Mandhal Distry
Kot Wah
Noor Wah
Karna Minor
Thar Tail Distry
Thar Canal
Sodi Distry
Farash Distry
Kandiaro Minor
Nabiser Minor
Sanwary Distry
Pelimore Distry
Kunri Distry
Bustan Distry
New Minor System
Jalal Minor
Old Sunthi Minor
New Sunthi Minor
Darello Minor
Silore Distry
Silore Feeder
Nara Canal
Theba Minor
Juma Distry
Sarhal Distry
Shah Bux Minor
Khipro Canal
Kamato Minor
Rohro Minor
Daro Bazar Minor
Samario Branch
Santor Minor
Hingorno Minor
Gidhor Distry
Doso Distry
Saidki Minor
Atta Minor
Palli Distry
Saifal Minor
SD 1R
5 L
6L
4 L A
4 L
M3 RB
M 3R
M4 R
M 3L
M2 R
M 1L
2 L
3 L
1L
LBOD Spur Drain
Mirpur Khas Main Drain
7R/LBOB.RD
18L
19L
4R
Doso Dharo Distry
Kaho Minor
Bargi Distry
Sanharo Minor
Sanharo Distry
Dabco Minor
Puran Minor
Puran Distry
Digri Minor
Mureed Minor
Mureed Distry
West Branch
Naseer Branch
Aliabad Distry
Sultani Branch
Chango Minor
Khairpur Minor
Sangi Minor
Jarkas Distry
Fazal Minor
Bhan Minor
Arbab Distry
Khatian Minor
Bhurgari Distry
Bhurgari Minor
Kabool Minor
Subrab Distry
Pitho Minor
Khan Canal
Mitarao Canal
Chhato Minor
Chach Minor
Nabiser Branch
Jamtao Canal
Bhurgari Feeder
Jauraiser Distry
Daleri Distry
Daleri Minor
Barar Minor
Puran Feeder
Dalpharo Minor
Thar Canal
Chhore Wah
Atta Minor
Ahro Minor
Tharal Canal

Sindh-Umerkot Surface/ Drinking Water Availability Map

Date (May 2014)

NoteUmerkot district lies in drought zone and was affected in 1999t o2002 and now again in 2013-14,Umerkot Taluka lacks irrigation infrastructure whereas Samaro , Pithoro possess in irrigation. Umerkot requires drinking water which can be provided through Water Supply schemes and expanding Irrigation infrastructure.



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Legend

- Settlements
- Settlements near to Drinking Water Facility
- River Bund
- Streams / Catchment Area
- River Indus
- Nara Zone
- Khohistan Zone
- Thar Zone
- Wetlands
- District Boundary
- Provincial Boundary
- International Boundary

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Map Doc Name:
iMMAP_Pakistan_Umerkot_Drinking Water Availability Map_A4L_140526
Creation Date: 28 05 14
Projection/Datum: WGS 1984
Web Resources: http://www.immap.org

0 45 90 Kilometers

Map data source(s):
PCO, National Geo-Spatial Agency,ASSESSMENT REPORT ON DROUGHT IN ARID ZONES OF SINDH(Tharcdeep), NASA, SIDA (Sindh Irrigation and Drainge Authority).

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1.1.7. Solid Waste Management

The exact data on solid waste management in district Umerkot is not available but Taluka Municipal Administration's (TMA) annual plan and projects can be useful for understanding the situation. Though the urban parts of the district have waste management facilities, rural parts are neglected in this regard[11].

[11] Report on Tranche Condition (2006), Taluka Administration, District Government Umerkot, Sindh Devolved Social Services Program (SDSSP), Government of Sindh http://www.fdsindh.gov.pk/sdssp/TMA%20-%20Umerkot%20-%20LSU%20Assessment%20Report.pdf) accessed on 10/06/2013

1.2. Demography

1.2.1. Population Characteristics

In Pakistan, male population is more than the female population and is among those four countries where life expectancy for female, at birth, is less than that of males[12]. Sex ratio in district Umerkot is 112 male per 100 females, which is more than the ratio at the national level that is 106[13]. Though there could be other possible reasons for such a difference in male to female ratio, one probable reason of this ratio could be underreporting of females during national surveys. Besides, a very high maternal mortality rate[14] and poor health care and non- availability of basic health facilities/infrastructure at the district level[15] are likely to be instrumental for this difference. District Umerkot, like majority of the other districts in Sindh, is rural by its characteristics as 83 percent of the population resides in rural area as compared to the 17 percent that resides in the urban areas.

Table 1.2.1: Estimated Population of District for 2012

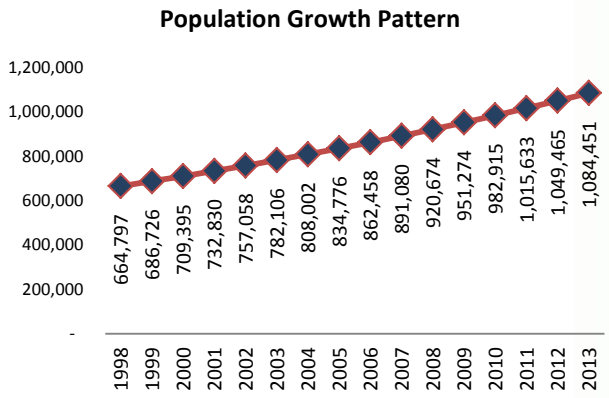
AGE GROUP (IN YEARS)	TOTAL			RURAL			URBAN		
	BOTH SEXES	*MALE*	*FEMALE*	*BOTH SEXES*	*MALE*	*FEMALE*	*BOTH SEXES*	*MALE*	*FEMALE*
ALL AGES	1,084,451	572,001	512,450	902,158	473,701	428,457	182,292	98,300	83,993
00 -- 04	181,566	94,384	87,182	154,721	80,470	74,251	26,846	13,914	12,931
05 -- 09	187,079	99,119	87,960	158,588	83,955	74,633	28,491	15,164	13,327
10 -- 14	139,665	77,160	62,505	115,769	64,168	51,601	23,895	12,992	10,903
15 -- 19	101,168	53,345	47,823	82,181	43,439	38,742	18,987	9,906	9,082
20 -- 24	95,546	46,917	48,628	79,055	38,215	40,840	16,490	8,702	7,788
25 -- 29	84,997	44,737	40,260	69,794	36,106	33,688	15,203	8,632	6,571
30 -- 34	65,059	36,485	28,574	51,902	28,527	23,375	13,157	7,958	5,199
35 -- 39	43,974	23,640	20,333	35,129	18,341	16,788	8,844	5,299	3,546
40 -- 44	44,101	21,846	22,255	36,305	17,882	18,423	7,796	3,964	3,832
45 -- 49	35,849	18,848	17,000	29,825	15,612	14,214	6,023	3,237	2,787
50 -- 54	31,430	16,675	14,755	26,569	14,091	12,478	4,861	2,584	2,277
55 -- 59	20,710	11,329	9,381	17,305	9,486	7,819	3,405	1,843	1,562
60 -- 64	20,368	10,792	9,575	17,133	9,188	7,945	3,235	1,604	1,631
65 -- 69	10,905	5,839	5,067	9,083	4,859	4,224	1,822	980	842
70 -- 74	10,567	5,320	5,246	9,029	4,582	4,447	1,537	738	800
75 & ABOVE	11,468	5,564	5,904	9,768	4,780	4,988	1,699	783	916

Source: Estimated from Sindh census, 1998

[12] A profile for District Badin: 2009, South-Asia Partnership Pakistan
[13] Labour Force Survey 2010-11: *Pakistan Bureau of Statistics*
[14] 0.5 for Sindh, Pakistan Demographic and Health Survey, 2006-07: National Institute of Population Studies, Pakistan. pp. 179
[15] Mean distance from hospital/dispensary is 11km for district: Pakistan Mouza Statistics, Table 15

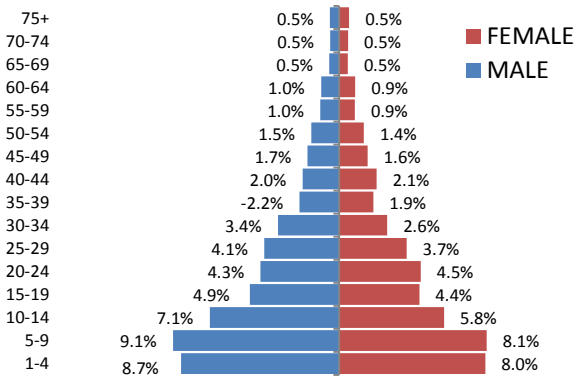
1.2.2. Population Growth Pattern

In 1998, the total population of talukas that currently form the district was 664,797[16]. Population of district Umerkot has an estimated inter-censual growth rate of 3.28% per annum, which means that the population will double itself in 21.34 years[17] from 1998. 46.87 percent of the population is below 15 years of age and 3.04 percent is 65 years or above. The estimated population for 2013 is 1,084,451, showing a 63% increase in 15 years from 1998.



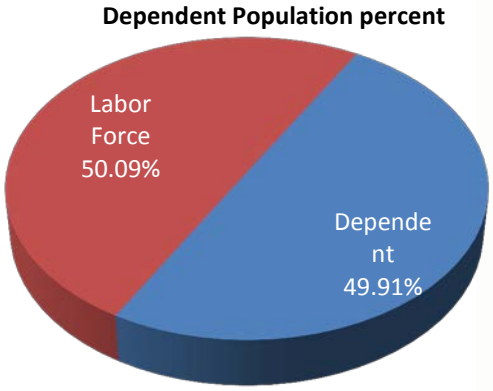
1.2.3. Population Distribution by Age and Gender

Out of the total population, 53 percent are males and 47 percent are females. Largest cohort of the population is 5-9 years, which decreases with 5 years interval. Total population in this cohort is 181,566.In age groups 20-24, 40-44 and 75+, male population outnumbers female population.



1.2.4. Dependent Population

The economically dependent population is considered to be the population that is less than 15 years and more than 65 years of age. In addition to them, widowed, and/or divorced women are also considered dependent population. Dependent population in the case of Umerkot district is 49.91 percent of the total population and the working population is 50.09 percent, which shows that dependency ratio[18] in the district is 100 percent.



[16] Sindh Development Statistics 2008, pp 45

[17] Rule of 70 http://controlgrowth.org/double.htm retrieved on 05-03-2012

[18] Dependency Ratio= (Population < 15 Years + Population > 65 Years)/ Population 15-65 Years

Table 1.2.2: Population By Taluka

Taluka	*Population*	*Male*	*Female*	*Pop Density*	*Sex Ratio*	Average HH Size	*Estimated HHs*
KUNRI TALUKA	240,461	125,387	115,075	411	109	5.8	41,459
PITHORO TALUKA	119,657	62,544	57,114	140	110	5.1	23,462
SAMARO TALUKA	174,735	90,921	83,815	182	108	5.3	32,969
UMER KOT TALUKA	549,597	293,562	256,035	171	115	5.3	103,698
Total	***1,084,451***	***572,413***	***512,038***	***193***	***112***	**5.4**	**201,588**

Table 1.2.3: Population by UC

S.#	TEHSIL	UNION COUNCIL	CENSUS 1998	Estimated Population 2013
1	**Umarkot**	U.C Umerkot	26,936	47,334
2		UC Gharibabad	25,007	43,944
3		U.C Dhoronaro	26,722	46,958
4		U.C Chhore	28,408	49,921
5		U.C Kaplore	26,675	46,876
6		U.C Khokhrapar	24,379	42,841
7		U.C Sabho	27,638	48,568
8		U.C Kharoro Syed	27,217	47,828
9		U.C Atta Muhammad Palli	26,839	47,164
10		U.C Mir Wali Mohd Talpur Gapno	25,932	45,570
11		U.C Khejrari	24,337	42,767
12		U.C Faqir Abdullah	22,663	39,825
		Total	**312,753**	**549,597**
13	**Kunri**	UC Kunri	22,598	82,153
14		UC Nabisar Road	21,777	79,169
15		UC Chajro	21,769	79,139
16		UC Kunri Memon	21,652	78,714
17		UC Bustan	25,145	91,413
18		Sher Khan Chandio	22,044	80,139
19		UC Talhi	23,230	84,451
		Total	**66,144**	**240,461**
20	**Samaro**	U.C Samaro	22,934	35,575
21		U.C Samaro Road	22,571	35,012
22		U.C Araro Bhurghri	21,005	32,582
23		U.C Satriyoon	22,902	35,525
24		UC Padhrio	23,235	36,042
		Total	**112,647**	**174,735**
25	**Pithoro**	UC Pithoro	28,169	41,519
26		UC Shadi Palli	26,356	38,847
27		UC Shah Mardan Shah	26,657	39,291
		Total	**81,182**	**119,657**
		G. Total	**572,726**	**1,084,451**

Umerkot- Population Density Map

May, 2014

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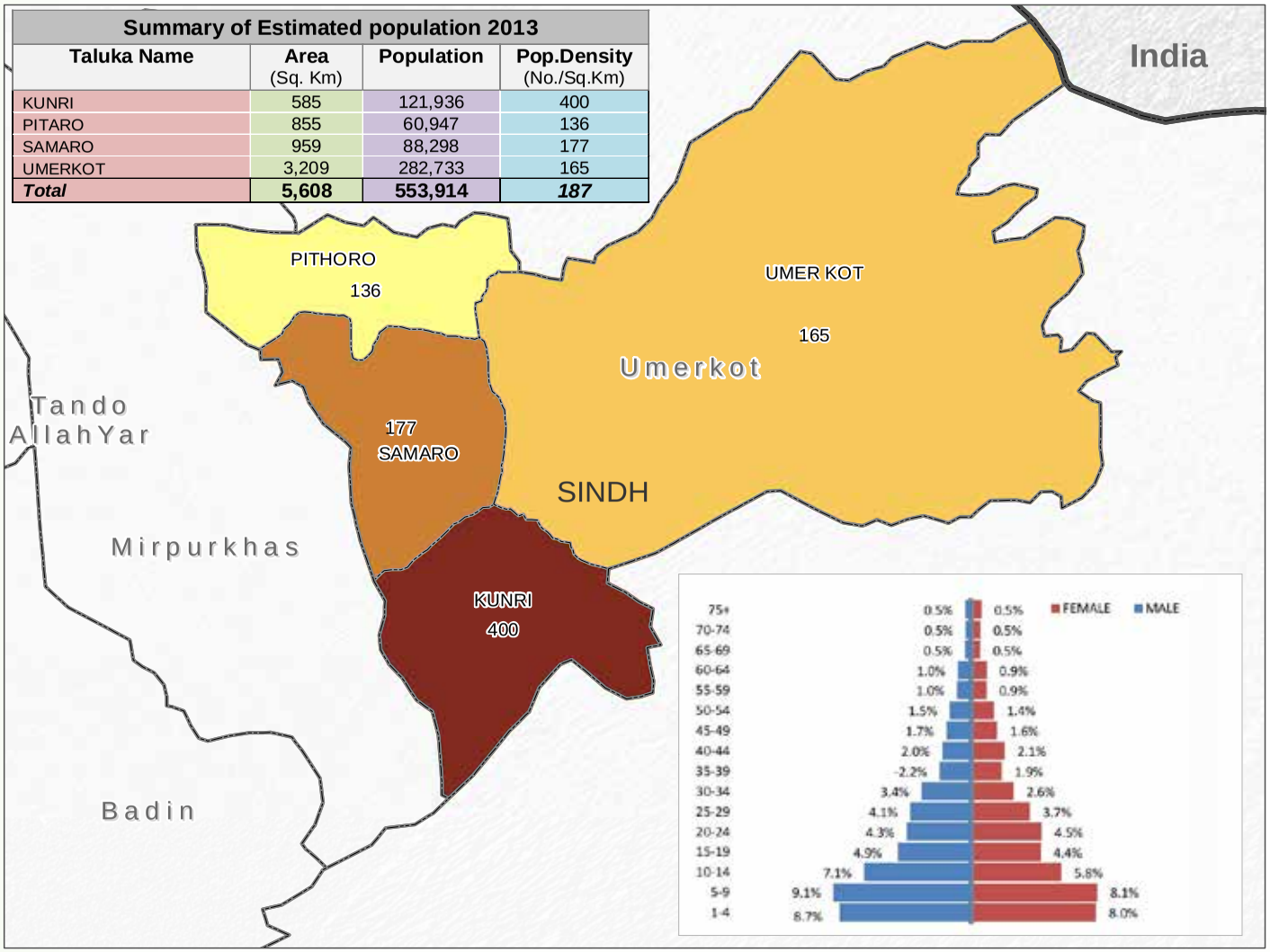
Summary of Estimated population 2013

Taluka Name	Area (Sq. Km)	Population	Pop.Density (No./Sq.Km)
KUNRI	585	121,936	400
PITARO	855	60,947	136
SAMARO	959	88,298	177
UMERKOT	3,209	282,733	165
Total	**5,608**	**553,914**	***187***



Legend

- International boundary
- Province boundary
- District boundary
- Taluka boundary

No. of Person /Sq Km

- 1 - 136
- 137 - 165
- 166 - 177
- 178 - 400

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Map Doc Name: iMMAP_PAK_Umerkot Population Density Map_v02_052814

Creation Date: May 28, 2014
Projection/Datum: WGS84
Web Resources: http://www.immap.org

0 5 10 20 Kilometers

Map data source(s):
Alhassan Systems Private Limited: Admin boundaries
Population: Derived from table 1, district census report

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1.3. Livelihood

1.3.1. Main Sources of Livelihood/Income

Since district Umerkot is an agro-based rural district where 83% of the population reside in the rural areas, the sources of livelihood are less diversified for the resident population. While agriculture is the main source of employment for the rural population, in the urban areas of the district people are engaged in various other economic activities like trade, services, personal business, and government and private jobs. Umerkot city is the main trading centers of this district.

The following table shows the number of rural mouzas reporting sources of employment in district Umerkot. Majority of the male population is associated with agriculture (in 70% of rural mouzas). While in the category of some; services sector, personal business and labour are frequent in the male population.

Given the cultural trait of Sindh and its rural areas, where women actively work side by side with the men, the female participation in economic activity is reasonable in this district, as 107 mouzas (46%) have reported that women are also engaged in agriculture. In the category of some, services sector, personal business and casual labor are the main sources of livelihood for the female population.

Table 1.3.1: Number of Mouzas Reporting Sources of Employment

GENDER	QUANTIFICATION	SERVICE	AGRICULTURE	TRADE	INDUSTRY	PERSONAL BUSINESS	OVERSEAS EMPLOYEMENT	LABOUR
MALE	MOSTLY	2	164	-	-	5	-	51
	SOME	219	61	67	15	165	1	158
	NONE	11	7	165	217	62	231	23
FEMALE	MOSTLY	-	107	-	-	4	-	50
	SOME	104	86	15	12	60	-	145
	NONE	128	39	217	220	168	232	37

Source: Mouza Statistics of Sindh: 2008, *Agriculture Census Organization*

The categories under which these mouzas have reported against different livelihood sources are:

- Mostly: population of 50 percent and above
- Some: population between 1 percent and 50 percent
- None: less than or equal to 1 percent

1.3.2. Agriculture

Agriculture sector plays a significant role in the overall economic performance of Pakistan. Currently, this sector provides employment opportunities to 45% of the labor force in Pakistan. This sector provides sources of livelihood to 60% of the population in the rural areas. Agriculture contributes 21% to the Gross Domestic Product (GDP) of Pakistan[19].

Agricultural lands of Umerkot, particularly in the western parts, are very fertile and major crops grown here are cotton, wheat, sugarcane and chili whereas other crops like bajra and guwar are also grown in the barani (rain fed) belt (comprising of the desert parts) of Umerkot. For many people in the rural areas, lack of access to basic agricultural inputs, such as good quality seeds, fertilizers, agricultural skills, coupled with lack of basic services in education and health, and above all scarcity of irrigation water, are the determining factors that affect agriculture productivity.

Total reported area of the district is 501,000 hectares. During 2004-07, 251,000 hectares (50%) were cultivated. Within the cultivated area, 153,000 hectares were net sown[20], whereas 98,000 hectares were fallow lands[21]. The remaining 50% of the total reported area was un- cultivated; out of which 88,000 hectares were not available for cultivation and 121,000 hectares are culturable waste19[22]. From 2008 to 2010, the total cultivated area was 249,000 hectares and within this cultivated area, 104,000 hectares were net sown and 145,000 hectares were fallow lands[23].

These figures reveal that there is a drastic change in the net sown area. From the previous reporting period to the next one, there is a 32% decrease in the net sown area. Umerkot is a desert area and over the years there has been a decline in net sown area. This decline is also evident from the irrigation statistics. The irrigation through canals has also decreased from 89% in 2008-09 to 82% in 2009-10.

---

[19] Economic Survey of Pakistan (2011-12), Ministry of Finance, Government of Pakistan

[20] **Net Area Sown** means the area which has been sown at least once in a year. It will include areas under crops, fruits, vegetables etc.

[21] **Current Fallow** means the part of the cultivated area which has not been used for cropping during the yearunder reference but for which the total vacant period does not exceed three crop seasons.

[22] Sindh Development Statistics 2008

[23] Sindh Development Statistics 2011

1.3.3. Industry

As stated above, this district is pre-dominantly agro-based, and industrial activities are rare. Due to the insignificance of industrial sector, the data on the industrial establishment is not available for this district.

1.3.4. Livestock

Livestock sector maintains a unique position within the agriculture sector of Pakistan. It contributes 51% to the value addition in agriculture sector of Pakistan. It also contributes 9% to the GDP of Pakistan21. Besides, this sector provides foreign earnings, dairy products' needs, food security and daily cash income to the people of Pakistan. It helps to reduce the income inequalities, especially in case of emergencies (floods, crop failure). Hence this sector is considered as most secure source of livelihood for small farmers and landless poor. The share of Sindh province in livestock population of Pakistan is 20%. The livestock population of district Umerkot is given in the following table.

Table 1.3.2: Livestock Population of the District

Livestock	Population
Cattle	197,308
Buffalo	97,842
Sheep	149,006
Goat	536,387
Camel	6,459
Horse	491
Mule	58
Ass	28,635
Domestic Poultry	179,945

1.4. Food Security

Food security can be broadly divided into four components[24]:

- ***Availability*** of food in terms of sufficient quantity available through domestic production or imports
- ***Access*** to adequate resources given the socio-political and economic arrangements of the community
- ***Utilization*** Refers to the body's ability to make use of the nutrients provided. This requires clean water sanitation and health care
- ***Stability*** includes an all-time access and utilization of food without any fear of losing it due to any shock (natural calamity, economic shock). This component points out to sustainability of food in an area.

1.4.1. Availability

Wheat along with other crops like cotton and sugarcane etc. is produced in most of the rural mouzas of district Umerkot. Besides, vegetables and fruits are also produced in the district. As the following table shows, wheat and rice are cropped in 88% and 2% of the mouzas respectively. The table below also shows the cultivation of other major crops in the district. The overall crop based food production is extremely deficit in Umerkot district[25].

Table 1.4.1: Number of Mouza Reporting Major Crops

ADMINISTRATIVE UNIT	NUMBERS OF MOUZAS REPORTING MAJOR CROPS							
	WHEA	RIC	COTTO	SUGARCAN	MAIZ	PULSES	ORCHARDS	VEGETABLE
UMERKOT	20	6	20	86	7	1	12	146
UMERKOT TALUKA	6	1	6	6	2	9	4	68
SAMARO TALUKA	5	5	5	38	2	5	3	54
KUNRI TALUKA	3	-	3	15	1	-	2	7
PITHORO TALUKA	4	-	4	27	1	-	1	17

Source: Mouza Statistics of Sindh: 2008, *Agriculture Census Organization*

Food availability not only depends on the obtainability of wheat but also depends on other cereals like maize etc. As far as cereal food is concerned, this district is self-sufficient in production for its food requirements. In addition to cereals, animal based food (meat, milk, milk products) availability is also important for total food availability, which also is produced in sufficient quantities in the district. However, combining both, the overall crop based and animal based food production, district Umerkot is extremely deficit in food production[26]. But, trade and economic activities of this district ensure the availability of food through imports from neighboring districts.

[24] Define by Food & Agriculture Organization
[25] Food Insecurity in Pakistan (2009), Sustainable Development Policy Institute (SDPI), Islamabad
[26] *Ibid*

1.4.2. Access

Per capita availability of food items alone is not a reliable indicator of food security. If the available food is socio-economically not accessible to the masses, it cannot make a society food secure. The income level of the households reflects access to food, capacity of consumption and even food poverty. Average monthly income of a household (HH) in district Umerkot is less than Rs.11, 000/- which is considered as extremely low[27].

Child dependency (ratio between children and household members in economically active age group) is one of the limiting factors in meeting the daily needs of households and is an important indicator to measure access to food. The increased dependency ratio enhances the spending of the household on child care and food, which results in per capita reduction of socio-economic access to food. Child dependency ratio is reasonable in this district. The share of household expenditures on food is 61.8% of the total income in Sindh. So the inadequate level of income, high food expenditures, and high inflation (particularly food inflation) hinders access to food[28].

The table below shows physical access to food in district Umerkot by providing distances of different mouzas from the wholesale markets. Average distance from the fruit and vegetable markets of a mouza is 18 and 14 kilometres respectively whereas the distance from the grain market is 15 kilometres. Such long distances impede access to food.

Table 1.4.2: Distance of Mouzas from Wholesale Markets

Type of facility		Overall mean distance (km)	Mouzas in distance (in kilometer) from the facility				
			Less than 1	1 to 10	11 to 25	26 to 50	51 and above
LIVE STOCK MARKET	NUMBER	16	6	87	110	27	2
	PERCENT		3	83	47	12	1
GRAINS MARKET	NUMBER	15	10	107	90	22	3
	PERCENT		4	46	39	9	1
FRUITS MARKET	NUMBER	18	8	94	90	28	12
	PERCENT		3	41	39	12	5
VEGITABLE MARKET	NUMBER	14	9	114	85	21	3
	PERCENT		4	49	37	9	1
GOVT. PROCUREMENT CENTRE	NUMBER	16	9	96	93	31	3
	PERCENT		4	41	40	13	1

Source: Mouza Statistics of Sindh: 2008, *Agriculture Census Organization*

1.4.3. Utilization

In addition to food availability and access, proper assimilation of food in the body is essential. Food utilization and stability depicts this absorption of food and its sustainability. Improved sanitation facility, clean drinking water, health infrastructure and individual health status along with female

[27] Food Insecurity in Pakistan (2009), Sustainable Development Policy Institute (SDPI), Islamabad
[28] *Ibid*

literacy play vital role in food absorption. According to Food Security Analysis (FSA) 2009, access to improved drinking water is very poor in this district[29].

Table 1.4.3: Percentage Distribution of HH by Source of Drinking Water

Umerkot	Water Delivery System				
	Tap Water	Hand Pump	Motor Pump	Dug Well	Ot
Total	3	1	5	1	37
Urban	6	1	7	0	9
Rural	2	1	4	1	43

Source: PSLM 2010-11

Sanitation conditions in district Umerkot are also poor where 37% of the households use flushes toilets and 30% of the households have non-flush toilets. The sanitation facility is comparatively worse in rural areas of the district and the female literacy rate is 23% only.

Table 1.4.4: Percentage Distribution of HH by Type of Toilet

	Flush			Non-			No	
Urban	Rural	**Total**	Urba	Rural	**Total**	Urba	Rural	**Total**
93	34	**61**	7	60	**35**	0	7	**4**

Source: PSLM 2010-11

In a nutshell, this district has sufficient availability of food, poor socio-economic access; and relatively poor level of food utilization environment. Combining all the indicators of food security i.e. availability, access, utilization and stability, it can be ascertained that Umerkot is an extremely food insecure district of Pakistan.

[29] Food Insecurity in Pakistan (2009), Sustainable Development Policy Institute (SDPI), Islamabad

1.5. Health

1.5.1. Health Facilities

The present infrastructure of healthcare in the district is not sufficient for the entire district. The total number of health facilities in district Umerkot is 66[30]. There are three taluka hospitals and one district head quarter hospital. These public health facilities can cater the need of only 30% of the estimated population-2013[31]. The number of health care staff in the district facilities is extremely low and gives a ratio of 0.01 doctors for 1,000 people and 0.001 female paramedics for 1,000 women[32]. The following table 1.5.1 shows the details of these health facilities.

Table 1.5.1: Health Facilities

Type	Number	Beds
District headquarter Hospital	1	
THQ Hospital	3	55
Rural Health centers (RHC)	6	50
Basic Health units (BHU)	30	48
Govt. Dispensaries	10	60
Mother and Child Health center	2	
Sub Health Centers	8	
Grand Total	**66**	

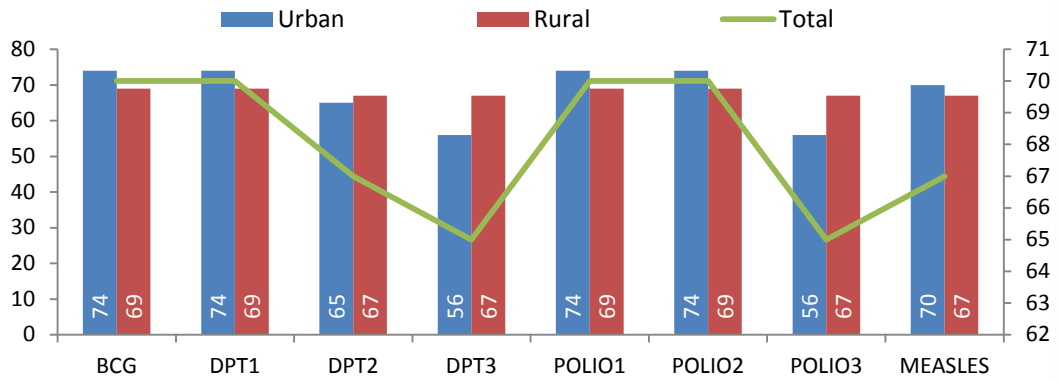
Health Facility Assessment Umerkot, TRF Pakistan

Besides there are 11 family welfare centers, 5 reproductive health centers and one eye hospital operating in the districts

[30] Profile of Umerkot district with focus on livelihood related issues by SOUTH ASIA PARTNERSHIP-PAKISTAN
[31] WHO Standard is 2 health facilities and 25 beds per 10,000 people.
[32] Profile of Umerkot district with focus on livelihood related issues by SOUTH ASIA PARTNERSHIP-PAKISTAN

1.5.2. Immunization

Immunization coverage in district Umerkot estimated that around 48% pregnant women have received tetanus toxoid injections. In urban areas this percentage is 79% and in rural areas it is 42%[33]. Record based[34] immunization data of district Umerkot shows that 65% (Male 69%: Female 62%) of the children aged 12-23 months have received full immunization. In the urban areas this percentage is 56 percent (Male 70%: Female 34%) and in the rural areas it is 67% (Male 69%: Female 66%). The corresponding graph shows the percentage of children of 12-23 months that have been immunized by the type of Antigen based on records[35].



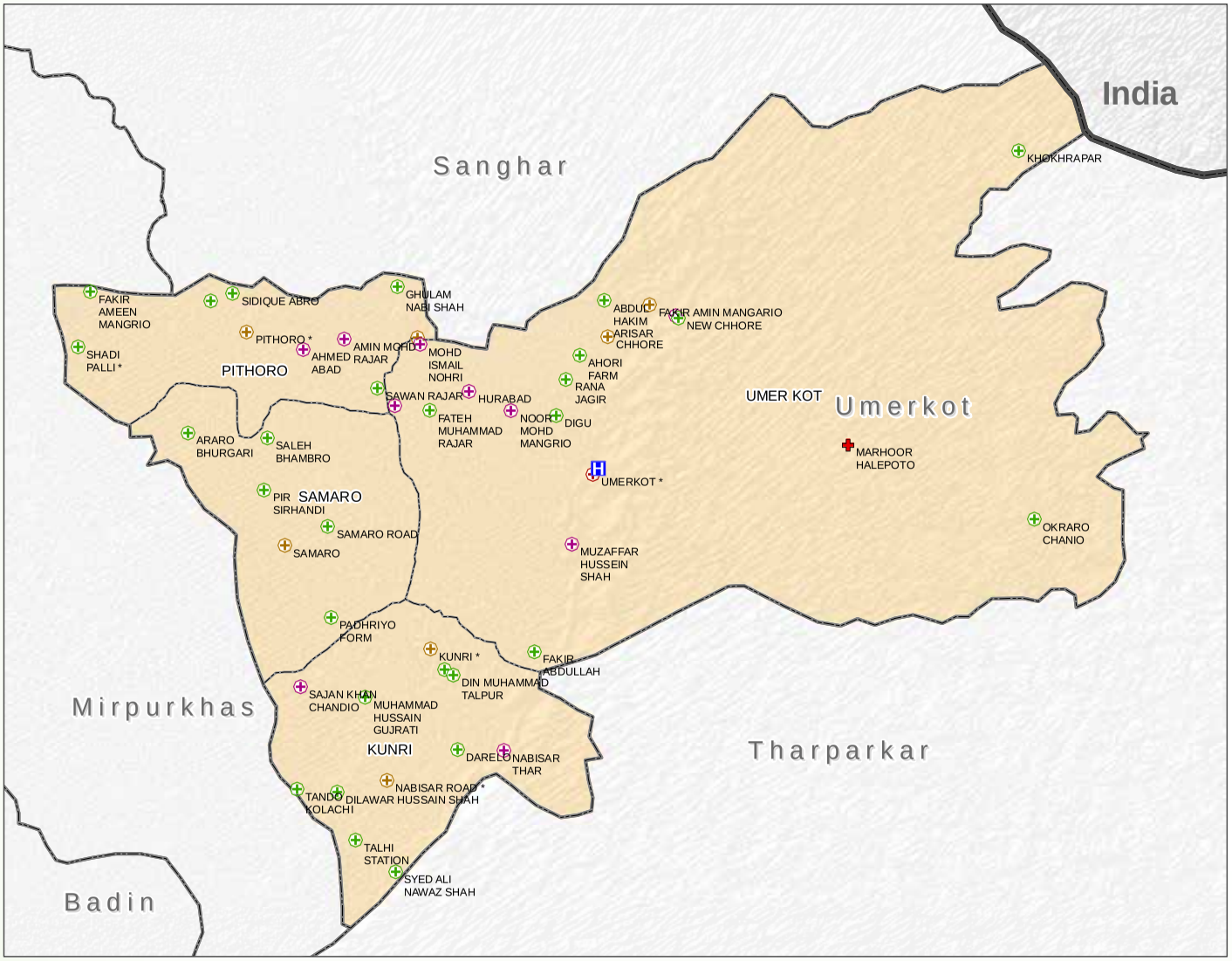
[33] Table 3.11, Pakistan Social and Living Standards Measurement Survey (PSLM)2010-2011

[34] Table 3.4 (b) Based on record: Children who reported having received full immunization who also have an immunization card, expressed as a percentage of all children aged 12-23 months. Also immunizations to be classed as fully immunized a child must have received: 'BCG', 'DPT1', 'DPT2', 'DPT3', 'Polio1', 'Polio2'

[35] Table 3.5: Pakistan Social and Living Standards Measurement Survey (PSLM)2010-2011

Umerkot - Health Facilities Map

May, 2014



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Legend

Health Facilities

- BASIC HEALTH UNIT
- DISPENSARY
- FIRST AID POST
- HOSPITAL
- MATERNAL & CHILD HEALTH CENTRE
- RURAL HEALTH CENTRE
- Taluka boundary
- District boundary
- Province boundary
- International boundary

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Map Doc Name:
iMMAP_PAK_Umerkot Health Facilities Map_v02_053014

Creation Date: May 30, 2014
Projection/Datum: WGS84
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0 5 10 20 Kilometers

Map data source(s):
Alhassan Systems Private Limited : Admin boundaries
World Heath Organization: Health Facilities

Disclaimers:
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1.6. Education

1.6.1. Highlights

Literacy Rate (10 years and above)		40%
Adult Literacy Rate (15 years and above)		38%
GPI Primary		0.59
GPI Middle		0.77
GPI Secondary		0.94
GPI Higher Secondary		0.20
Population that has ever attended School		39
	Male	54
	Female	21
Population that has completed primary level or higher		31
	Male	44
	Female	15
Primary Participation Rate		46
	Male	55
	Female	35

Source: Umerkot Education Profile 2012-13and PSLMSurvey 2012-13

1.6.2. District School Enrolment Ratio

The education status is quite poor in district Umerkot. The overall literacy rate (for the population of 10 years and above) is 40%; for male it is 58% and for female it is 20%. For the urban rural comparison, urban literacy rate is higher than the rural, which is 60% (male: 74% and female: 43%); whereas the rural literacy rate is 36% (male: 54% and female: 15%). Adult literacy rate (for the population of 15 years and above) is 38%. Gross Enrollment Rate[36] (GER) at the primary level in Umerkot is 67% (Male: 74%, Female: 60%), in urban community it is 95% (Male: 98%, Female: 91%) and in rural community it is 62% (Male: 69%, Female: 55%). Net Enrollment rate[37] (NER) at the primary level in district Umerkot is 47% (Male: 49%, Female: 44%), in urban community it is 61% (Male: 66%, Female: 55%) and in rural community it is 44% (Male: 48%, Female: 43%). Table 1.6.1 shows details of Gross and Net Enrolment Rates by Rural, Urban and Gender at different levels.

[36] Total enrolment in a specific level of education, regardless of age, expressed as a percentage of the eligible

[37] Enrolment of the official age group for a given level of education expressed as a percentage of the corresponding population.

Table 1.6.1: Gross and Net Enrolment Rates by Gender and Locality at Different Levels

Urban/ Rural/ District	Gender	Gross Enrolment Rates			Net Enrolment Rates		
		Primary Group (5-9)	Middle Group (10-12)	Matric Group (13-14)	Primary Group (5-9)	Middle Group (10-12)	Matric Group (13-14)
Urban	Male	98%	55%	66%	66%	24%	20%
	Female	91%	42%	48%	55%	17%	12%
	Total	95%	49%	59%	61%	20%	17%
Rural	Male	69%	50%	45%	48%	19%	5%
	Female	55%	18%	13%	43%	9%	4%
	Total	62%	35%	34%	44%	14%	4%
Total	Male	74%	50%	48%	49%	20%	7%
	Female	60%	22%	20%	44%	10%	5%
	Total	67%	37%	38%	47%	15%	6%

Source: Pakistan Social and Living Standard Measurement Survey 2012-13

1.6.3. Gender and Level Wise Detail

The total enrollment of students in the government schools of district Umerkot is 108,704 (Boys: 69,460 and Girls: 39,244). Out of a total of 3,566 teachers, 2,872 are male and 694 are female teachers. This illustrates that one teacher is teaching averagely 30 students. The total boys' schools of District Umerkot are 561, and the total female schools are 422. Besides, there are 1,326 mixed gender schools. Thus, the total number of schools is 2,309 and averagely every school has an enrolment of 47 students and a teaching staff of around 2.

Primary

The total number of primary level schools, that are reported, is 2,156 and the total enrollment at the primary level is 82,244 (Boys: 51,655 and Girls: 30,589). Total number of teachers, at the primary level, is 2,937, out of which 2,374 are male and 563 are female teachers. Thus, on an average, each primary school has an enrolment of 38 students with a teaching staff of 1. However, the student class ratio is 25 and each school has averagely around 2 class room.

Middle

There are a total of 92 middle schools reported. Total enrollment, at the middle level, is 3,428 (Boys: 1,935 and Girls: 1,493). The total number of teachers at the middle level is 104, out of which 90 are male teachers and 14 are female teachers. Thus, on an average, each middle school has an enrolment of 37 students with a teaching staff of 1. However, the student class ratio is 14 and each school has averagely around 3 class rooms.

Secondary

There are a total of 48 secondary schools. Total enrollment at the secondary level is 10,481 (Boys: 5,405 and Girls: 5,076). The total number of teachers at the secondary level is 310, out of which male teachers are 210 and female teachers are 100. Thus, on an average, each secondary school has an enrolment of 218 students with a teaching staff of 6. However, the student class ratio is 39 and each school has averagely around 6 class rooms.

Higher Secondary

There are a total of 13 higher secondary schools in the district. Total enrollment at the higher secondary level is 12,551 (Boys: 10,465 and Girls: 2,066). The total number of teachers at the higher secondary level is 215, out of which male teachers are 198 and female teachers are 17. Thus, on an average, each higher secondary school has an enrolment of 965 students with a teaching staff of 17. However, the student class ratio is 79 and each school has averagely around 12 class rooms.

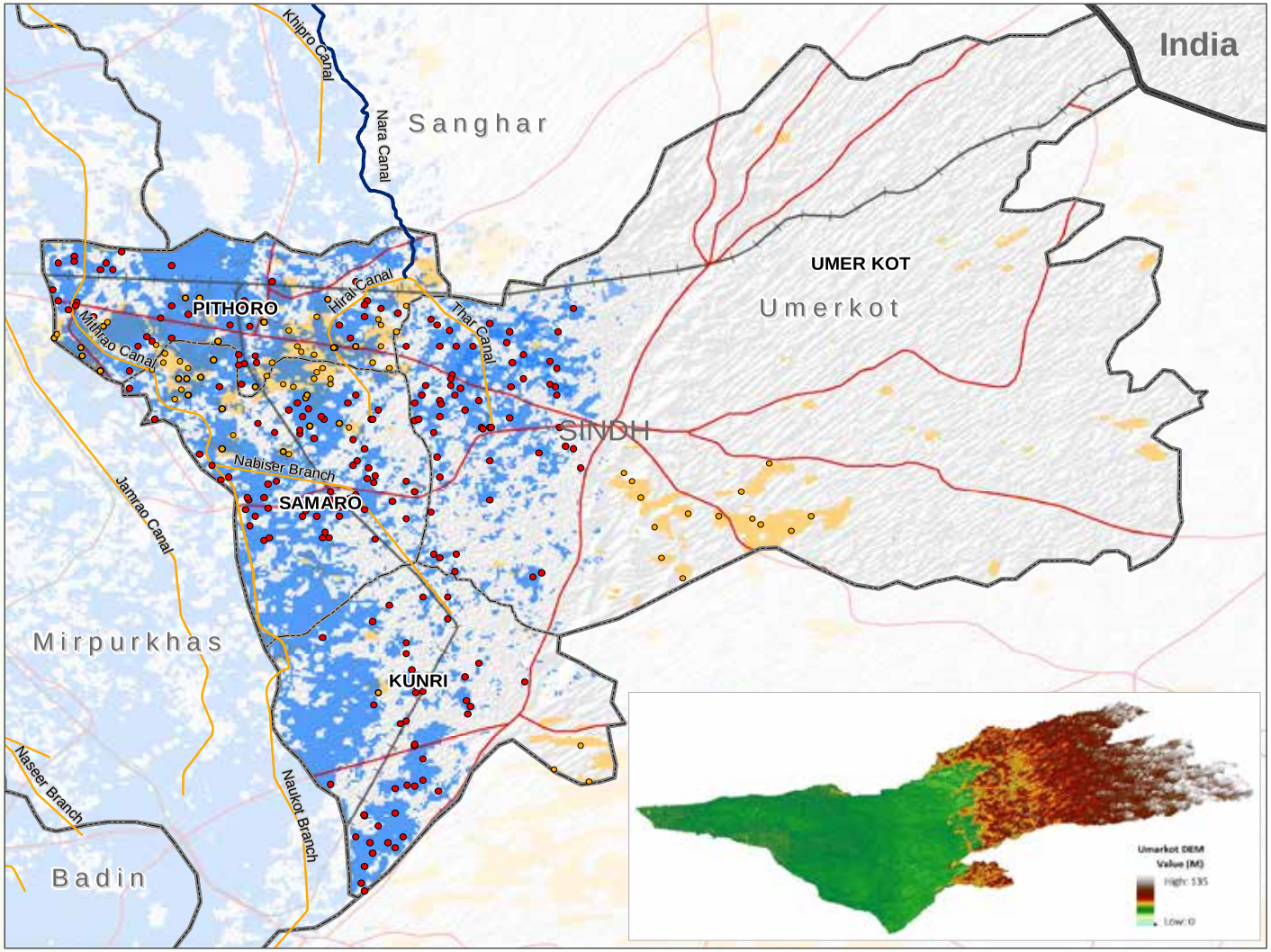
Table 1.6.2: Enrolment and Educational Facilities by level and Gender[38]

Level	Enrolment			School Facilities				Teachers		
	Boys	Girls	Total	Boy	Girls	Mixed	Total	Male	Femal	Total
Primary	51,655	30,589	**82,244**	518	386	1,252	**2,156**	2,374	563	**2,937**
Middle	1,935	1,493	**3,428**	15	21	56	**92**	90	14	**104**
Secondary	5,405	5,076	**10,481**	20	13	15	**48**	210	100	**310**
Higher Secondary	10,465	2,086	**12,551**	8	2	3	**13**	198	17	**215**
Total	**69,460**	**39,244**	**108,70**	**561**	**422**	**1,326**	**2,309**	**2,872**	**694**	**3,566**

[38] Umerkot Education Profile 2012-13 RSU SIndh.

Umerkot - Risk Analysis Map

May, 2014



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Legend

- Settlement at drought risk
- Settlements flood risk
- Canals
- Branch Canals
- Roads
- Railway
- International boundary
- Province boundary
- District boundary
- Taluka boundary
- Maximum Flood Risk (2010-12)
- Area at Drought Risk

IMMAP
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IMMAP_PAK_Umerkot Risk Analysis Map_v02_052714

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Alhassan Systems Private Limited : Admin boundaries
Logistic Cluster-World Food Program: Roads
National Geospatial Agency: Settlements
Sindh Irrigation and Drainage Authority (SIDA) : Canals, Branch
MODIS: Maximum Flood Extent
ASTER G-DEM: Digital Elevation Model

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2 Disaster History

2.1. District Disaster History

2.1.1. Disaster History

District Umerkot was hit by 2011 rains /floods. River Indus, after receiving water from 5 of its tributary rivers, causes floods in the northern and southern parts of Sindh province. The upper region of Sindh Province comprises of the districts of Jacobabad, Shikarpur, Kashmore, Larkana and Kamber Shahdadkot on the right bank of River Indus and Ghotki, Sukkur, Khairpur, Naushahro feroze and Sukkar on the left bank of River Indus. These districts, on the right and left banks of River Indus, are prone to severe threat when River Indus is in high flood. The districts in the lower Sindh are prone to riverine flooding and include: Dadu, Jamshoro and Thatta on the right bank of River Indus and Tando Muhammad Khan, Matiari and Hyderabad on the left bank. The length of River Indus along the province is 750 kms long.

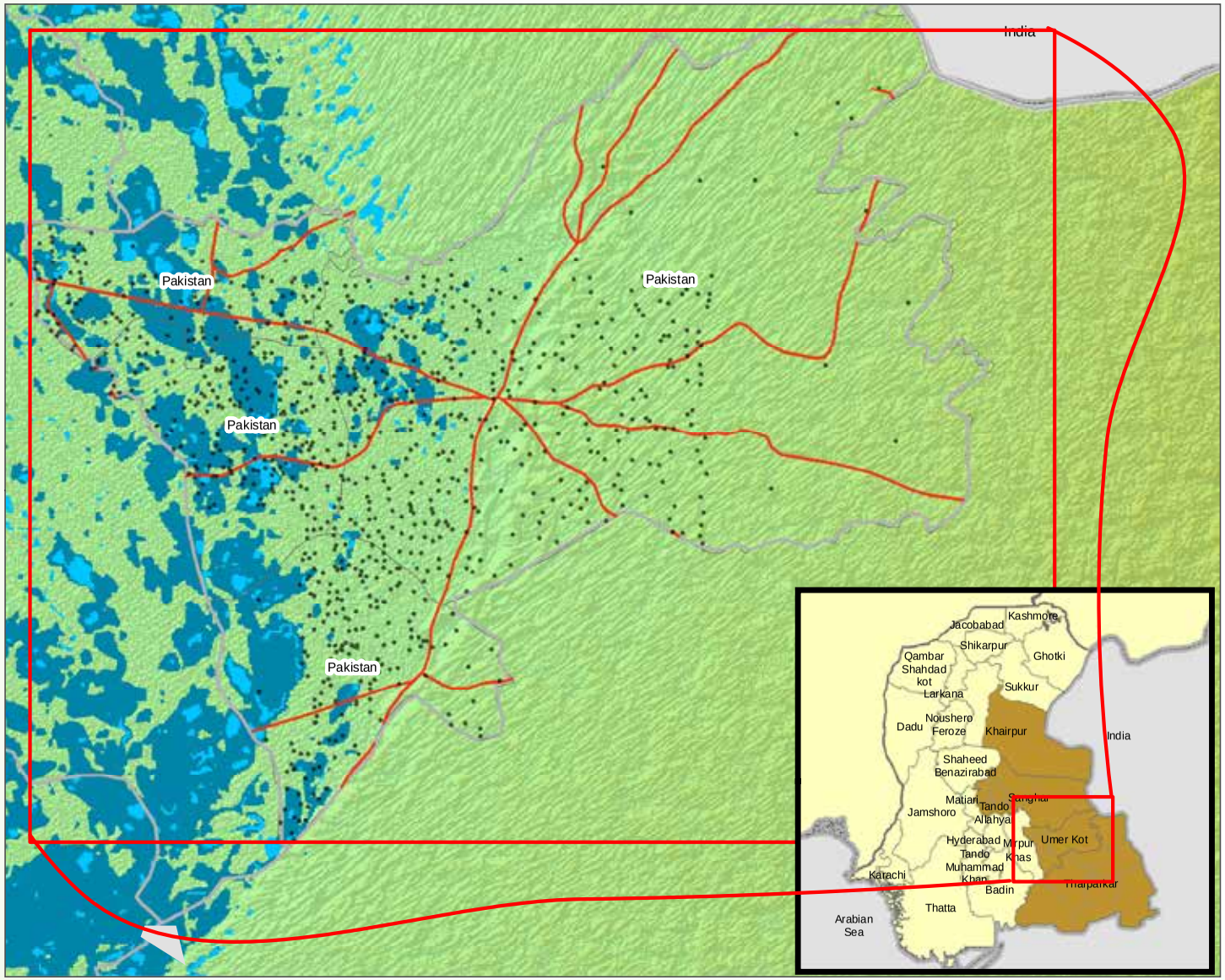
According to PDMA Sindh, district Umerkot following are vulnerable points

- Thar Canal RD-33 NIP Side
- Thar Canal RD-34 NIP Side
- Thar Canal RD-48 NIP Side
- Thar Canal RD-52 NIP Side
- Mithrao Canal RD-254 to 258 NIP
- Mithrao Canal RD-308 to 312 NIP
- Mithrao Canal RD-410 to 418 NIP

Umerkot has a disaster history of heavy rain fall, earthquakes, floods, and droughts, but droughts remain more frequent[36]. Heavy rainfall seems to be less frequent. On average, Umerkot and the desert region has a scanty annual average rainfall of 10 inches (Bhata 1963). The Royal Commission on Indian Agriculture, in 1925, has described the region's economy as a 'gamble on the monsoon' (Chen, 1986).

District Umerkot - Hazard Map

Date (May 2014)



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Legend

- Settlements
- Road Network
- Drought Affected Talukas 1999-2002,2013-14
- Permanent Water Features
- Rain Flood 2011
- Taluka Boundary
- District Boundary
- Provincial Boundary
- International Boundary

iMMAP Because Information Matters

Solutions in Time ALHASAN SYSTEMS

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0 10 20 Kilometers

Map data source(s):
Alhasan Pvt Limited (Boundaries), National Geo-Spatial Agency, Pakistan Weather Portal, PDMA Sindh (Situation Report), NASA,

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2.1.2. Impact of Disaster history on Demography

The district was severely hit in 2011 by rains/floods. Overall 78.31% of the population was affected due to rains/floods in all 27 union councils of the district. However, according to the PDMA Sindh's assessments, after floods 2010, the district falls under the category of very low risk districts[39]. The extent of damage in 2011rains/floods is given in the table below.

The extent of damage in the district, comparatively, remained substantially low in the district during the recent floods of 2012. A total of 1,200 people were affected and 6 casualties were reported by the concerned authorities. A total of 331 housing units were partially affected in 93 villages and a crop area of 1,262 acres was inundated by rains/floods[40].

Table 2.1.1: Summary of Losses and Damages in Floods/Rains 2011

Attribute		Figure	Source
Total Households	195,071		Estimated
	Affected Households	152,195	
Total UCs		27	UN-OCHA
	UC Affected	27	PDMA-SINDH
Total Revenue		232	SINDH MOUZA STATISTICS
	Villages/Settlements Affected	3,769	UN-OCHA
Total Houses		122,103	PDMA-SINDH
	Partially Damaged	28,655	
	Destroyed	93,448	
Total Population	1,049,465		Estimated
	Affected Population	821,851	PDMA-SINDH
	Male	401,620	
	Female	491,961	
Death		31	
Injuries		7	
Total Area	*1,385,767*		
Total Affected Area		*927,966*	PDMA-SINDH
Crop Area Affected		*108,303*	

2.1.3. Impact of Disaster on Livelihood & Agriculture

Along with the demographic losses, due to floods/rains 2011, the loss to agriculture sector exacerbated the sources of livelihood for the people of this district. The following table shows the loss to agriculture sector of this district.

Table 2.1.2: Crop Loss and Area Damaged Due to Floods 2011

Major Crops		Area
Cotton	Area sown (Acre)	63,527
	Area Damaged (Acre)	63,527
	%	**100%**
Rice	Area sown (Acre)	0

[39] Flood 2010, Disaster Management Apparatus in Sindh

[40] Update-Losses and Damages 23/01/2013, PDMA Sindh

Major Crops		Area
	Area Damaged (Acre)	0
	%	**0**
Sugarcane	Area sown (Acre)	6,032
	Area Damaged (Acre)	4,222
	%	**70%**
Other	Area sown (Acre)	40,554
	Area Damaged (Acre)	40,554
	%	**100%**
	Total Area Sown	**110,113**
	Total Area Damaged	**108,303**

As given in the table above, 100% of the cotton and 70% sugarcane crops were damaged along with 100% damage to other crops. 17,334 livestock loss was reported[41].

2.1.4. Analysis of Food Security Situation

District Umerkot is agro-based and majority of the households are engaged in agriculture farming and livestock rearing activities but there are still others who are engaged in non- agriculture activities/casual labour. Among these three types of the households, empirical studies have shown that poverty is relatively higher in the non-agriculture households, followed by livestock households and small farmers[42]. It has been shown in the previous section that many individuals of this flood affected district lost their homes (122,103 houses were damaged), their crops (108,303 acres of crop area affected) and heads of livestock (17,334 livestock died). Due to the lack of a strong industrial base, the sources of income of households, situated in this severely affected district, are less diversified, with their heavy dependence on agriculture, livestock and casual labour. This further exacerbated the food security situation. Given the deplorable social indicators i.e., large household size, poor literacy level, higher mortality rate, inadequate infrastructure with poor access to education and health facilities show the higher level of poverty and deprivation in this district.

Through the destruction of roads, transport and market infrastructure, the floods had a significant negative impact on commodity market. As a result, the functioning capacity of the markets (transporters, processors, wholesalers and retailers) decreased with upward movement of transaction costs and shortage of food commodities. This phenomenon hindered the socio-economic access to food in the district[43].

The losses to crops and livestock along with the poor functioning capacity of the markets reduced the expected income of the population of this district. Thus the floods and rains affected people of the district Umerkot had to face a number of key challenges to recover their livelihood, agriculture and livestock; directly affecting the food security situation.

[41] Flood Situation Update, 2011, Food & Agriculture Organization (FAO)
[42] Arif, et al (2010), "The 2010 Flood and Poverty in Pakistan: A Preliminary District-level Analysis", Pakistan Institute of Development Economics Islamabad, Background Paper for Conference on the " The Environments of the Poor", 24-26 Nov. 2010, New Delhi
[43] *Ibid*

2.1.5. Impact of Disaster on Health

Severe floods can not only cause destruction of heath care infrastructure but also affect health indicators of the affected population. Umerkot district was severely hit in 2011 heavy rains that resulted in damage to the public health infrastructure.

According to initial health assessments, conducted by WHO and Government of Sindh, after floods 2011, 9 out of 34 Basic Health Units (BHUs) were damaged, but no Rural Health Center was affected. There is only 1 district headquarter hospital and 3 taluka hospitals which were affected too[44]. Health conditions before floods 2011 were already unsatisfactory and floods worsened the situation even more[45].

In 2012 floods, 7,589 moderate acute malnourished children, 4,595 severe acute malnourished and 6,498 malnourished PLWs needed to be treated and out of them 2,039 moderate acute malnourished children, 1,131 severe acute malnourished and 2,073 PLWs were treated. 10,028 women were provided with relevant information on Infant and Young Child Feeding (IYCF)[46].

2.1.6. Impact of Disaster on Education

Due to the floods/rains of 2011, 204 school facilities were damaged, out of which 68 were fully destroyed and 136 were partially damaged. Also, heavy rains affected the school going children. Due to the damages to the schools, houses and roads; education of 16,320 students was affected (Girls: 7,018, Boys: 9,302). Teachers numbering 544 were also affected[47]. No loss was reported to the school facilities due to floods 2010 and 2012.

2.1.7. Drought 2013-14

District Umerkot is adjacent to Tharparkar and faces similar climatic changes as Tharparkar. Umerkot also has huge desert area and droughts are common in this geographical spread. In December 2013, famine like droughts struck Tharparkar, Umerkot, Khairpur and Sanghar. Though more damage is reported in Tharparkar as almost all the human and livestock population got severely affected, Umerkot also suffered from this drought. The failure of monsoon rains, since Nov-2013, resulted in severe shortage of food, fodder and water. The NDMA, PDMA, Sindh Government, United Nations, National and International Non-Governmental Organizations are providing health and relief services and are distributing food items in the affected areas[48]. Pakistan Met Department has announced that this year monsoon rains will be again be below average[49].

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[44] WHO, G. N. (8th to 12th September, 2011). Health Initial Rapid Assessment, 22 flood affected districts in Sindh. Islamabad

[45] Mouza Statistics Sindh, 2008

[46] http://pakresponse.info/LinkClick.aspx?fileticket=1ZnSb6B8oFM%3D&tabid=98&mid=722

[47] Damage Need Assessment, Sindh-EMIS Reform c Unit, Department of Education and Literacy, Government of Sindh

[48] Daily Emergency and Response-Stitautional Information Report, 15th May, 2014. iMMAP

[49] Preliminary Monsoon Outlook 2014, PMD.

This latest drought hits only 25 Dehs of the district, rendering 33,445 families vulnerable to malnutrition and hunger. A population of 167,229 people was affected from December 2013 to 22nd April 2014. Human and animal population in the district suffered from the severe shortages of food and fodder. The recent drought has caused the highest number of deaths in persons and livestock in the district's desert area. According to the District Health officer of Umerkot, from 17th March, 2014 to 7th May 2014, twenty five (25) deaths have been reported in the DHQ Hospital Umerkot[50]. The PDMA Sindh, with the support of the district administration, has provided medical treatment to both (persons and animal). Presently, three Medical Camps and five mobile medical teams are working in desert area of the district. At present, a stock of 800 to 900 Anti-Snake Venom (ASV) and 3,000 to 3,500 Anti-Rabies Vaccines (ARV) is available for the affectees at the district main store DHO office Umerkot[51].

Following health facilities are currently functional in the district.

- DHQ Umerkot
- THQ Kunri
- THQ Samarao
- THQ Pithoro
- RHC Nabisar Road
- RHC Dhoronaro
- RHC Hyder Farm
- RHC Chhore
- RHC Fakir Mohd.Amin mangrio
- RHC Khokhrapar

As of 18th March 2014, 7,419 children were admitted in the district health facilities of which 2,233 were under five. 54 cases were referred to the major secondary level health facilities. 3,056 under five children have been reported for suffering from malnourishment. 47 children have reportedly died of whom 33 were under five. During the emergency, the district administration deployed 135 mobile teams and established 126 fixed camps where 2,999 and 2,895 patients have been treated respectively.

Along with human population, animal population is also affected, especially small animals. Livestock is the main source of livelihood in these desert like districts, particularly in the absence of industry in Umerkot District. As reported by the district administration, 50 Sheep and Goats have perished. 354,059 small animals (sheep and goats) along with 35,725 large animals have been vaccinated in the district, during the drought emergency[52].

[50] Cumulative Data of Daily Health Report by DHO Umerkot shared on Daily Basis during Drought Like Situation in Umerkot,
[51] Daily Health Report of District Umerkot shared by DHO Umerkot.
[52] District Livestock Department

Table 2.1.3: Losses and Damages for Drought 2013-14

Tehsil	Period	Pop 2013	Families Affected	Deaths				Persons Treated					Cattle head	
				Male	Female	Children	Total	Male	Female	Children	Total	Affected	Perished	Treated/ Vaccinated
Umerkot	11-03/2014 to 17-4-2014	167,299	33,445	3	2	10	15	15,445	16,939	7,574	39,968	-	50 Goat and Sheep Perished	293,984

Losses and Damages as of 22 April, 2014. PDMA Sindh

Table 2.1.4: Relief Items distributed in Umerkot

Agency	Relief Good	Quantity	Agency	Relief Good	Quantity
PDMA Sindh	Family Ration Packs	10,000	Raised Donation by PDMA Sindh at Relief Collection Camp Karachi	Mineral water (1.5 ltr)	350
	Rice (50Kg bags)	430		Mineral water (1/2 ltr)	400
Raised Donation by PDMA Sindh at Relief Collection Camp Karachi	Atta Bag (50 kg)	5		Mineral water (small)	67
	Atta Bag (10 kg)	1653		Oil 1 kg (boxes)	15
	Atta Bag (5 kg)	70		Oil (2.50 Kg)	50
	Rice (50 kg bag)	1		Mixed Ration Packets	1,736
	Sugar (50 kg bag)	1		Medicine Mixed (Packets)	11
	Mineral water 6 ltr	468		Juice and Milk	51
	Mineral water (5 ltr)	350		Milk Powder (Nido)	408
	Mineral water (1 ltr)	2,580		Biscuit Packets and papsy	50

PDMA Sindh

3 Hazard Vulnerability and Capacity Analysis

3.1. HVCA Analysis

Prior to analyzing existing hazards; vulnerability to hazards and capacity to cope with the same of the district and its population needs to be understood. An explanation of the terms used is given under each heading, as follows:

3.1.1. Hazard

A hazard is a situation which triggers disaster. But it can be also defined as:

"A potentially damaging physical event, phenomenon or human activity that may cause the Loss of life or injury, property damage, social and economic disruption or environmental degradation"[53]

A hazard is a situation that has the potential to harm the health and safety of people or to damage plant and equipment. Hazards can be divided into two categories.

Natural Hazard

Natural hazards are natural processes or phenomena within the earth system that may constitute a damaging event. For example typhoons, tsunamis, earthquake and volcanic eruption cyclones, earthquakes, floods, landslides, storms are natural hazards.

Man-made Hazard

Any industrial, nuclear, or transportation accident, explosion, power failure, resource shortage, or other condition, resulting from man-made causes, which threaten or cause damage to property, human suffering, hardship or loss of life constitute 'Man-made Hazard.

Hazard Matrix

Hazard	Frequency	Area affected/union councils	Severity/Force	Year
Floods	Monsoon	Entire district excluding southern side(which is white Desert)		2011,2012
Heavy rains	Monsoon	Whole district	High	2011,2012
Epidemics	Seasonal	Entire district	Low	Every year
Droughts	Rare	Whole district	Low	1999-2002
Dust storms	Frequent	Whole district	low	Throught
Earthquake	Rare	Whole district	Low	----

[53] "Urban Governance and Community Resilience Guides", (2010), Asian Disaster Preparedness Center

3.1.2. Vulnerability

Vulnerability is a situation which is:

"The attributes and circumstances of a community or system that makes it sensitive, vulnerable or susceptible to the damaging effects of a hazard[54]"

Vulnerability precedes disasters, contribute to their severity, hinder and obstruct the disaster response. It is divided into three parts:

Physical/Material Vulnerability

Weakness of the built environment and lack of access to physical and material resources i.e. living in hazard prone areas or in unsafe buildings, lack of savings, insurance and assets constitutes physical/material vulnerability.

Social/Organizational Vulnerability

Social/Organizational Vulnerability refers to inequality in social systems that discriminate against and marginalize certain groups of people from accessing resources and services. People who have been marginalized in social, economic or political terms are vulnerable to disasters. Weakness in social and organizational areas may also cause disasters e.g. deep division can lead to conflict and war. Conflict over resources due to poverty can also lead to violence.

Attitudinal/Motivational Vulnerability

Existence of fatalistic myths and religious beliefs influence people's vulnerability to disaster risks. If people believe that disasters are 'acts of God' and if they have low confidence in their ability to affect change or have 'lost heart' and feel defeated by events they cannot control, these people are often harder hit by disasters.

Vulnerability Matrix

Physical/material	Social/organizational	Attitudinal/motivational
District Umerkot lies at the edge of the famous Thar Desert (56 percent[55] of the total area of the district is desert) and is prone to severe droughts. Droughts occur here frequently due to no or very little rainfall. Umerkot faces at least one drought for one or more seasons every decade. Last drought that started in 1999 and remained for more than three years was one of the worst in known history[56].	According to 1998 census, total population of the district Umerkot was 663,000[57]. The district has an estimated growth rate of 3.28% per annum, which means that the population will double itself in 21.34 years[58] from 1998. Such rapid growth in population gives birth to many socio-economic problems and makes the area vulnerable to different natural and made-made hazards	Lack of knowledge, on the part of the general public and local officials about severity of hazards - that may affect them, associated risks, damage, and precautions to be taken, is perhaps one of the most significant hindrance in present day efforts to mitigate the potentially disastrous effects of most hazards.

[54] Participant's Course Workbook, Asian Disaster Preparedness Center (ADPC)
[55] Profile of district Umerkot with focus on livelihood related issues,(2009), South Asia Partnership-Pakistan, pp.20
[56] Ibid, pp.25
[57] Sindh Development Statistics, (2008). Pp 27
[58] Rule of 70 http://controlgrowth.org/double.htm

Physical/material	Social/organizational	Attitudinal/motivational
Droughts affect labour market negatively and decrease livelihood opportunities.		
The eastern portion of the district has a tropical climate, being more hot and dry, but receives comparatively more rains during monsoon. In 2011, heavy monsoon rains, overflow and breaches in Left Bank Outfall Drain (LBOD) and Mithrao canal disrupted the whole district. 2,869 villages[59] of 27 union councils in all the 4 talukas were affected.	Like majority of the other districts in Sindh, district Umerkot is rural by its characteristics. 83 per cent of the population resides in rural areas as compared to the 17 per cent that resides in the urban areas. Most people in the rural areas lack job opportunities, health and educational facilities which escalate the risk against different hazards. [floods, rains and droughts]	Advocacy seminars and awareness campaigns regarding disaster risk reduction are insufficient.
Absence of disaster risk reduction measures in most of the construction and infrastructure developments is resulting in the formation of poorly managed infrastructures, buildings which lack coping capacity against natural hazard like earthquake. A geological tectonic[60] line runs under Thar desert, due to which Umerkot has risk of a major earthquake in the future.	Dependent population (the population that is less than 15 years and more than 65 years of age including widows and divorced women) in the case of Umerkot district is 49.91 per cent of the total population and the working population is 50.09 per cent, which shows that dependency ratio[61] in the district is 99 per cent, which is very high and as such makes the population highly vulnerable.	Most people believe disasters, as an Act of Nature which cannot be prevented.
The climate of the district is extreme hot and dry with summer temperature mounting to as high as 41 degrees Celsius[62]. Very high temperature not only affects vegetation but also creates problem for the individuals like heat stroke, skin burn and sometimes death of a person.Children, women, old and disabled people are vulnerable to severe hot climate.	The status of education is quite poor in Umerkot district. The overall illiteracy rate (for the population of 10 years and above) is 56%; for males it is 39 and for females it is 77 % while Adult illiteracy rate (15 years and above) is 62 %. Illiterate people cannot be easily mobilized and made aware of the different disasters' risks.	Reactive approach prevails in the district i.e., the government and all other stakeholders come into action when disaster occurs whereas the need is for proactive approach (disaster risk reduction) where actions are taken in advance of the disaster. Therefore, gravity of the situation demands for a paradigm shift from reactive approach to a proactive one.
Climate change is said to be responsible for the heavy rains of 2011 and 2012 because usually Sindh province receives very little rains (on average 5 inches[63] during monsoon). Environmental scientists agree that they cannot explain the floods in Sindh as the area that	There is a lack of Community Based Disaster Risk Reduction (CBDRM) projects in the vulnerable areas of the district. Focus of the different organizations working in the area is only towards relief side.	Local vulnerable communities are mostly not familiar with preventive measures to be taken before, during and after disaster (droughts and rains/floods).

[59] UNOCHA, Pakistan Floods 2011, Umerkot District Profile, Nov 2011
[60] Disaster Risk Management Plan, Sindh Province (2008), pp. 34
[61] Dependency Ratio= (Population < 15 Years + Population > 65 Years)/ Population 15-65 Years
[62] Profile of district Umerkot with focus on livelihood related issues,(2009), South Asia Partnership-Pakistan, pp. 9
[63] Disaster Risk Management Plan, Sindh province,(2008), PP. 34

Physical/material	Social/organizational	Attitudinal/motivational
received the rain is normally very dry.		
Livelihoods of the people are not sustainable that is it cannot cope with and recover from stress and shocks and when disaster strikes; these livelihoods collapse. As a result poor people get poorer and fall under the poverty line.	There are no Disaster Management Committees (DMCs) and Emergency Response Committees (ERTs) in the vulnerable communities of the district. DMC and ERT members are trained (on DRR and first aid) and are first responder to any emergency situation.	Lack of coordination amongst all stakeholders is a major hindrance in implementation of the disaster risk management process.
	Non-structural mitigation measures which include trainings, workshops, seminars, land use planning and building codes are not properly implemented by the concerned departments in the district which makes the people vulnerable to different hazards e.g., floods, earthquakes.	
In the whole district, piped water is available to only 35 per cent of the housing units. In rural areas pipe water is available to 28 per cent of the households while 13 percent[64] of rural households have hand pumps inside the housing units. By drinking unsafe and contaminated water people gets vulnerable to hepatitis and other water born disease.	Risk assessment is the process of hazard identification, analysis and determination of appropriate ways to control these hazards. At the district level, there is a deficiency in risk assessment of disaster prone areas. Vulnerability map (used to identify vulnerable locations) of the district is also not available.	
Early Warning systems, in Pakistan, lack the basic equipment, skills and resources[65]. Similarly, early warning system for the floods in the district is not up to the mark. Monitoring stations from the agriculture department, in some instances, were unable to take the measure of water level and report them, timely.	Disasters, poverty and vulnerability are interlinked as it has been observed that, during disasters, the most affected population are the poor of the community. The incidence of poverty has increased as floods/rains have reduced income level of the households by damaging their assets and sources of income and thus have aggravated the household poverty.	
The district lack funds and resources for risk reduction projects. The government and the people both are in dire need of funds and resources like boats, life jackets, first aid kits, ropes, torches.	There is a lack of coordination amongst stakeholders (government, NGOs and vulnerable communities) working on disaster risk management.	

[64] Pakistan Social and Living Standards Measurement Survey (PSLM), 2010-11, pp. 429

[65] Government of Pakistan (2006), "National Plan: Strengthening National Capacities for Multi-hazard Early Warning & Response System (Phase-I)", Cabinet Division, pp.8

3.1.3. Capacity

Capacities are resources, means and strengths, which exist in households and communities and which enable them to cope with, withstand, prepare for, prevent, mitigate or quickly recover from a disaster. The combination of all the strengths attributes and resources available within a community, society or organization that can be used to achieve agreed goals constitute its capacity to cope with hazards[66].

Physical/Material Capacity

In most disasters, people suffer their greatest losses in the physical and material realm. Access to physical/material things or objects count as physical capacity. A few examples of physical and material resources are cash, food, land, properties and tools.

Social /Organizational Capacity

When everything physical is destroyed, people still has their skills, experiences and knowledge; they have family and social networks. They have leaders and systems for making decisions. They also have local, collective 'wisdom' reflected in their cultural practices that help them reduce or cope with disaster risks.

Attitudinal/Motivational Capacity

People also have positive attitudes and strong motivations such as the will to survive and willingness to help each other.

Capacity Matrix

Physical/material	Social/organizational	Attitudinal/motivational
Umerkot reasonably contributes in agriculture sector of Sindh because its climate is suitable for production of various food items e.g., sugarcane, cotton and wheat. The annual production of wheat, sugarcane and cotton, over the period 2008-09, was 130.2 (000 Tonnes), 243.8 (000 Tonnes) and 114.4 (000 Bales) respectively.	District Disaster Management Authority (DDMA) of Umerkot district has been established in the DCO's office on a temporary basis. DDMA formulates disaster plan for the district and assigns roles and responsibilities to the local district departments. DDMA carries out emergency response and relief activities in the affected areas.	Advocacy seminars and trainings regarding disaster risk reduction (DRR) are very limited but have been initiated by different NGOs for the mobilization of vulnerable communities against hazards (floods, rainfalls).
The total number of schools in the district is 2,329. Out of which 2,188are primary schools, 10 elementary, 73 are middle, 46 are secondary, and 12 are higher secondary schools60. These school buildings are also used as shelter and evacuation centres in emergency.	Community organizations are formed by NGOs in the affected areas to encourage the local representation. Active people from the community are part of these organizations which facilitate the humanitarian organization work at the grass root level.	Indigenous knowledge is great strength of the local community which could be be useful if considered in LBOD project. The project specialists refused to take the indigenous knowledge of the people which is now creating problem in form of flood disasters.

[66] Participant's Course Workbook, Asian Disaster Preparedness Center (ADPC)

Physical/material	Social/organizational	Attitudinal/motivational
Road network is considered as a vehicle for economic development. The district is well-connected with other districts through good quality roads. Total good quality roads length is 631 kilometres in this district[67]. These roads can be used as evacuation point in flood disaster. Good roads are also helpful in carrying out relief activities.	The overall literacy rate (for the population of 10 years and above) is 44%; for males it is 61 and for females it is 23 % while Adult literacy rate63 (15 years and above) is 38 %[68]. Literate people can easily be mobilized and made aware of the different disaster risks.	Volunteers and philanthropists from all over the districts provide all kind of services whether in-kind or financial.
District Umerkot has well established and efficient canal irrigation system in north and west zone. Main canals of the district are Nara Canal and Mithrao Canal. Thses are the main irrigation sources for the district which helps in agriculture productivity.	During emergency, Government departments help the disaster hit communities in evacuation and try to maintain law and order situation in the area.	The teachers, young educated Students and youth assist the social workers working in their communities. They organize gatherings for mobilization sessions and act as a catalyst in the field.
Umerkot district is rich in livestock i.e. cattle, buffalo, goat and sheep are found in every part of district Umerkot and there are many dairy farms in district Umerkot. Livestock also provides rich food such as meat, milk, eggs, and poultry meat.	Law Enforcement Agencies are important stakeholders in relief activities. Jawans (Soldiers) of Pakistan Army assist the affected communities directly and help them in evacuation, by providing transport facilities. Army doctors provide medicines and other health facilities to the affected people especially to the children and women	In post flood activities, Psycho-Social problems of the people (especially children and women) were addressed by the psychologists, hired by different organizations. Religious scholars (Ulemas) also contribute their part by counseling flood affected people.
According to the World Health Organization (WHO), total health facilities in the district are 64. There are four hospitals, 4 Rural health centres (RHCs), 34 Basic health units (BHUs), 1 Mother and child health centres (MCHs), 5 T.B clinics and 14 Dispensaries. These health facilities provide health services both in rural and urban areas of the district, not only as a routine but also in extreme circumstances.	After the 2011 and 2012 floods/rains, different NGOs /INGOs have focused their attentions on shelter, wash, and livelihood activities. These organizations include World Food Programme (WFP), CRDO, ACTED, IOM, UNHCR Sami foundation and Nishat welfare organization64. They provide funds and relief stuff to the affected people, to enable them to stand on their own.	

[67] SINDH Education Management Information System (SEMIS), District Education Profile,Umerkot, 2010-11, pp.1

[68] Pakistan Social and Living Standard Measurement Survey (PSLM), 2010-11, pp. 139

4 Sectoral DRR Mitigation Measures

4.1.1. Education

- The NGOs (National Commission for Human Development, Sami Foundation, UNICEF, and NRSP) should work on awareness building programs for encouraging enrollment in schools, by incorporating teachers, students and youth in their community based programs. Increased enrollment would lead to enhanced literacy and literate people can easily be mobilized and made aware of the different disaster risks.
- From pre-school to secondary school, Integrate DRR trainings into the formal and non-formal education curricula.
- NGOs and other organizations working on education sector should organize workshop to provide teachers with training on disaster preparedness and training early warning signs**.**
- Education department should produce support materials for teaching and learning linked with disaster risk reduction.
- The Government and NGOs should invest in DRR sector and should corporate DRR measures in improving school buildings as these can be used as shelter and evacuation center in case of emergency.
- Incorporate disaster risk reduction measures i.e, ensure their suitable location and construction while establishing new schools in order to avoid future hazard threats.
- Humanitarian organizations should take on board the District Education Department and should provide trainings and necessary skills to the education officials to enable them to prepare School Based Disaster Risk Management Plans (SBDRM-Plan) for each school in the district.

4.1.2. Infrastructure

- Awareness programs should be organized by District Disaster Management Authority about the need of land use planning and building codes so that it can be followed by all the stakeholders, to avoid future threats.
- The Communication and Works department should utilize the available funds on the maintenance of roads and find alternative routes that can be used in case of emergency.
- Road networks should be expanded to each corner of the district so that emergency response could be easily conducted without any hurdle.
- Active people from the community can be used for disseminating early warning for the local endangered communities because people have lot of trust in informal and locally influential sources of information; e.g. a religious leaders, a teachers, an NGO worker or a local government official. But firstly these active people should also be trained on EWS
- Awareness regarding investment in the DRR sector should be initiated in order to avoid future threats.

4.1.3. Health

- Health department should take care of establishment of health facilities focused on certain population. All the health related issues should be dealt by them. But the responsibilities have to be identified.
- Advocacy seminars should be organized at district level for the training of medical staff to implement National Health Programs.
- DDMA should assign the responsibilities of health department to ensure the availability of medical and paramedical personal in hospital, BHU's, MCHC, and RHC's. Moreover, mobile health teams should be mobilized so that the health facilitators can visit the local areas to provide basic health care especially for the vulnerable group such as people with disabilities, elderly persons, children, females and those who hesitate to go to the hospitals because of cultural constraint and long distance.
- Stabilization centers for the people suffering from acute malnutrition should be established in each small and big hospital.
- Water conservation projects should be initiated by the Government and NGOs in order to mitigate the drought threats

4.1.4. Livelihood

- Agriculture scientists should produce heat resistant and low water dependent seeds to bolster the agricultural productivity in Umerkot.
- District Livestock department should plan in advance for the vaccination of livestock population in case of scarce rainfall and mobile teams for the monitoring of the situation.
- Fodder stocks should be maintained by the livestock department of the district to cope with emergencies.
- Livestock owners should be encouraged to insure their cattle heads.
- Capacity can be built through awareness programs on livelihood diversification.
- Alternative methods of food production should be introduced in district to mitigate drought effects.
- Flood control and salinity control projects can be conceived to make more land available for cultivation
- NGO's (ACTED, CESVI, CWS, CRDO, FAO, GRDO, HANDS, IMC, NRSP, PFF, Plan, PVDP, RI, RDF, RDP, SADA, SAFWCO, Sami Foundation, SC, SSSF, SHED Foundation, SCF, SDDO, Trocaire , WFP) should organize advocacy seminars, trainings and awareness sessions for improved agricultural practices by incorporating CBOs' chairmen and presidents as they have great influence over the community members.
- Irrigation department should carry out hydraulic studies so that flooding can be avoided and find out catchment areas and water courses for surface run off.

4.1.5. Food

- Stockpiling of essential food items should be encouraged among the community through awareness programs.
- Number of Food distribution point should be established in the emergency hit area and should be easily accessible to most of the needy population.
- For extremely vulnerable groups such as elderly persons, people with disabilities, female and children, separate desk and queues at food distribution point should be established so that they do not suffer difficulties in attaining food
- Civil administration should look after the availability of food.

4.1.6. Wash

- NGOs (Hilfswerk Austria Intl:, Islamic Help, IMC, RDF, SAMI Foundation, SDI, Tameer-e-Millat Foundation, PVDP)should encourage TMA's officials participation in the awareness sessions, programs and trainings, related to water treatment practices and hygiene practices which will capacitate the vulnerable communities of the area against the communicable diseases .
- Innovative approaches are required to ensure the availability of low-cost, simple, and locally acceptable water and sanitation interventions. Integrating these approaches into existing social institutions such as schools, markets, and health facilities is required.
- Tehsil Municipal workers should monitor the quality of pipe water and should distribute chlorine tablets for water purification in order to avoid diseases like cholera and hepatitis etc. Big water tanks/reservoirs should also be cleaned regularly.
- DRR measures should be incorporated in the construction of sewerage system in order to minimize the possibility of over flowing of sewage water in rainy days and to mitigate the hygiene issues.

4.1.7. Government and Humanitarian Sector

- The District Disaster Management Authority in coordination with other humanitarian organizations working in different sectors should develop the disaster database of prevailing threats by making use of the available data and past record of disasters in district Umerkot.
- District Disaster Management Authority should appeals for assistance through media at the national and international level.
- District Disaster Management Authority should coordinate with the NGOs working in different sectors to address the problems of people. The NGOs working on different projects can be invited and can be asked for initiation of DRR projects in the vulnerable areas of the district.
- Coordination among key stakeholders should be strengthened for disaster risk reduction measures, implementation and effective emergency response.

5 Coordination and Support Services

5.1. Important Contacts

5.1.1. Departmental Focal Points

S#	Department	Office In charge	Designation	Location	Telephone Numbers	
					Office	Mobile
1	Administration	Mr. Nadeem-ur-Rehman Memon	Deputy Commissioner	Umarkot	0238570700	
		Allah Nawaz Memom	Additional Deputy Commissioner	Umarkot	0238570262	
		Muhammad Asim	Assistant Commissioner	Kunri	0238558015	0333-2786925
		Mr. Ghulam Hussain Kaniho	Assistant Commissioner	Pithoro	0238541262	
		Mr. Nazeer Ahmed	Assistant Commissioner	Samaro	0238551086	
		Mr. Abul Aala Bhatti	Assistant Commissioner	Umarkot	0238570236	
		Mohmand Khan Kati	Mukhtiarkar	Samaro	0238571489	
		Mr. Liquat Ali Rajput	Mukhtiarkar	Pithoro	023851262	
		Mr. Manzoor Ahmed Junejo	Mukhtiarkar	Umarkot	0238-557908	
		Mr. Ghulam Hyder Khaskheli	Mukhtiarkar	Kunri	0238-5587098	
2	Works & Services	Mr. Sarang Ram	Superintending Engineer	Umarkot	0238-571896	0332-3183195
		Mr. Abdul Qayoom Veryamani	XEN, Highways Division	Umarkot	-	0345-4488388
		Mr. Muhammad Azam Memon	XEN, Education	Umarkot	0238-571221	0333-2733239
		Mr. Imtiaz Ahmed Memon	XEN, Buildings Division	Umarkot		0300-3004797
3	Education	Mr.Ghulam Mustafa Soomro	District Education Officer	Umarkot	0238-570672	0331-3885748
4	Health	Dr.Muhammad Umer Rind	District Health Officer	Umarkot	0238-571458 0238-570716	033-12776392
5	Agriculture	Mr. Satidan Singh	Deputy Director Agriculture	Umarkot	0238-570494	0345-3455341
6	Forest	Mr.Muhammad Ali Bhatti	SubDivisional Forest Officer	Umarkot	0238-570357	0331-2866655
7	Livestock	Dr. Abdul Ghani	Deputy Director	Umarkot	0238-	0345-

S#	Department	Office In charge	Designation	Location	Telephone Numbers	
					Office	Mobile
		Bajeer	Livestock		500240	3771579
8	Accounts	Mr. Muhammad Iqbal Khan	District Accounts Officer	Umarkot	0238-570749	0300-3310836
9	Social Welfare	Mr. Abdul Wahid Leghari	District Officer, Social Welfare	Umarkot	0238-571074	0346-3812979
10	Irrigation	Mr.Zaheer Memon	AEN, Irrigation	Umarkot	0238-571359	0300-3030987
11	Local Government	Mr.AbdulJalil Thebho	Chief Officer, DC	Umarkot	0238-570740	0305-3307108
		Mr Mohmand Parl Shahani	Town Officer	Umarkot	0238-570326	
		Mr Niaz Ahmad Babar	Town Officer	Kunri	0238-558242	
		Mr. Nizamuddin Shahani	Town Officer	Samaro	0238-551310	
		Mr. Abid Hussain Qaim Khani	Town Officer	Pitaro	0238-541521	

5.1.2. Emergency Response

S.No	Name or Organizations	Office Contact
1	Edhi Ambulance	115
2	Electricity Complaint	118
3	Police Emergency	15
4	Telephone (Complaint)	1218
5	Telephone Enquiry	1217
6	Sui Gas Help line	1199
7	PIA Flight enquiry	114
8	TCS Courier	0238-500221
9	Railway inquiry	117

5.1.3. List of NGOs in Umerkot

S. No	Organization Name	Address	Email	Contact Number
1	Rural Areas Development Organization	Rado office Nagori Flat Umer kot..	Rado.organization@yahoo.com	0336-3380625
2	Mehran Development Organization	Fort road near almehran typing Centre Taluka Umarkot	Mdo_ukot@yahoo.com	0345-3774243/0331-3895647
3	Sangam Development Organization	Qambrani Mohallah Umarkot	k.lavaha@gmail.com	0333-2662000
4	Sindh Desert Development	B- 16 Near Civil	sddoukt@gmail.com	0331-3885606

S. No	Organization Name	Address	Email	Contact Number
	Organization	Hospital Thar bazar		
5	Sindh Agriculture Development Association Near Agriculture office Umarkot	Sindh Agriculture Development Association Office Near Taluka Agriculture Extension Office Thar Bazar	sada.agri@yahoo.com	0333-2978960
6	Khosa Development Society	Ward # 310 khosa Mohallah Umer kot	abdullah.umerkot@gmail.com	0333-2505416
7	Deep Development and Welfare Organization	College Road Khatri Street Umarkot	khatri.bhagwandas@gmail.com	0333-7154650
8	Mehran Education Health Welfare Association	Nabisar Road Taluka Kunri	Mehwanabisar@gmail.com	0333-2957106/0238-575282
9	Young Welfare Association	Village Mian Pir Muhammad Walhari Kambhro Taluka Pithoro post office Dhornoro..		0331-3886594
10	Sami Foundation	Near DCO House Akbar-e-Azam Road Umarkot. Near eye hospital	Sami.foundation@gmail.com	0238-571593/0300-3300980
11	Thar Nara Development Society Umarkot	Plot # 105 Ward# 311 Gareeb Abad Umer kot	k.premee@gmail.com/yahoo.com	0238-571215/0346-2190227
12	Right to Play Umarkot	Right to Play Office Ward #311 Rohal wah road Umer kot..	haleem.rtp@gmail.com	0300-3024150/0238570179
13	Haakro Local Support Organization Dhoronaro	Hakro LSO Opposite Governmet Girls Primary School Abdullah Shah Bukhari Dhoronaro Takula Umer kot	haakro_lso@yahoo.com	0333-7199414/0238572262

5.1.4. Police Stations

Taluka	Rank and Name	Office / Mobile Number
Umarkot	SP Qamar Raza Jhatgani	0238-570741/0333-2600567
Umarkot	DSP Muhammad Moosa Pitasi	0336-0217645
Kunri	DSP Niaz Abbasi	0321-7979992
Pitharo	DSP Ilyas Baloch	0300-8376117
Samaro	DSP Ashraf Nonari	0344-3271009

5.2. Health Facilities

5.2.1. Public Hospitals in Umerkot

S.No	Hospitals	Name of In charge M.S	Contact Number
1	District Headquarter Hospital, Umarkot	Dr. Jhanwar Lal	0238-571234 03332510951
2	Taluka Headquarter Hospital, Pithoro	Dr. Kirshan Khatti	0238-541506 03342818715
3	Taluka Headquarter Hospital, Samaro	Dr. Aslam Qaim Khani	0238-551112 03068262192
4	Taluka Headquarter Hospital, Kunri	Dr. Mitha Ram	0238-557458 03337032941

5.2.2. List of Health Facilities in Umerkot

Taluka	Union Council	Health Facility Name	HF_TYPE
UMARKOT	UMARKOT	DISTRICT HEADQUARTER HOSPITAL,UMARKOT	HOSPITAL
UMARKOT	CHHORE	RHC CHHORE	RURAL HEALTH CENTRE
UMARKOT	FAKIR AMIN MANGARIO	RHC FAKIR AMIN MANGARIO	RURAL HEALTH CENTRE
UMARKOT	ATTA MUHAMAD PALLI	BHU FATEH MUHAMMAD RAJAR	BASIC HEALTH UNIT
UMARKOT	FAKIR ABDULLAH	BHU FAKIR ABDULLAH	BASIC HEALTH UNIT
UMARKOT	GAPNO	BHU DIGU	BASIC HEALTH UNIT
UMARKOT	KHARORO SYED	BHU RANA JAGIR	BASIC HEALTH UNIT
UMARKOT	KHARORO SYED	BHU AHORI FARM	BASIC HEALTH UNIT
UMARKOT	SHAH MARDAN SHAH	BHU ABDUL HAKIM ARISAR	BASIC HEALTH UNIT
UMARKOT	CHHORE	BHU NEW CHHORE	BASIC HEALTH UNIT
UMARKOT	KHOKHRAPAR	BHU KHOKHRAPAR	BASIC HEALTH UNIT
UMARKOT	KAPLORE	BHU OKRARO CHANIO	BASIC HEALTH UNIT
UMARKOT	SOOFI FAKIR	DISP SOOFI FAKIR	DISPENSARY
UMARKOT	MOHD ISMAIL NOHRI	DISP MOHD ISMAIL NOHRI	DISPENSARY
UMARKOT	HURABAD	DISP HURABAD	DISPENSARY
UMARKOT	NOOR MOHD MANGRIO	DISP NOOR MOHD MANGRIO	DISPENSARY
UMARKOT	MUZAFFAR HUSSEIN SHAH	DISP MUZAFFAR HUSSEIN SHAH	DISPENSARY
UMARKOT	CHORE	DISP NEW CHORE	DISPENSARY
UMARKOT	UMARKOT	MCHC UMARKOT	MATERNAL & CHILD HEALTH CENTRE
KUNRI	KUNRI	TALUKA HEADQUARTER HOSPITAL,KUNRI	HOSPITAL
KUNRI	NABISAR	RHC NABISAR ROAD	RURAL HEALTH CENTRE
KUNRI	KUNRI	RHC KUNRI	RURAL HEALTH CENTRE
KUNRI	TANDO KOLACHI	BHU TANDO KOLACHI	BASIC HEALTH UNIT
KUNRI	TALHI	BHU DILAWAR HUSSAIN SHAH	BASIC HEALTH UNIT
KUNRI	TALHI	BHU TALHI STATION	BASIC HEALTH UNIT

Taluka	Union Council	Health Facility Name	HF_TYPE
KUNRI	MUHAMMAD HUSSAIN GUJRATI	BHU MUHAMMAD HUSSAIN GUJRATI	BASIC HEALTH UNIT
KUNRI	PITHARO	BHU SYED ALI NAWAZ SHAH	BASIC HEALTH UNIT
KUNRI	KUNRI MEMON	BHU KUNRI MEMON	BASIC HEALTH UNIT
KUNRI	SATIRYOON	BHU DIN MUHAMMAD TALPUR	BASIC HEALTH UNIT
KUNRI	SHER KHAN CHANDIO	BHU DARELO	BASIC HEALTH UNIT
KUNRI	SAJAN KHAN CHANDIO	DISP SAJAN KHAN CHANDIO	DISPENSARY
KUNRI	NABISAR THAR	DISP NABISAR THAR	DISPENSARY
PITHARO	PITHARO	TALUKA HEADQUARTER HOSPITAL,PITHARO	HOSPITAL
PITHARO	PITHORO	RHC PITHORO	RURAL HEALTH CENTRE
PITHARO	DHORONARO	RHC DHORONARO	RURAL HEALTH CENTRE
PITHARO	SHADI PALLI	BHU SHADI PALLI	BASIC HEALTH UNIT
PITHARO	CHHORE	BHU FAKIR AMEEN MANGRIO	BASIC HEALTH UNIT
PITHARO	KHEJRARI	BHU HYDER FARM	BASIC HEALTH UNIT
PITHARO	PITHORO	BHU SIDIQUE ABRO	BASIC HEALTH UNIT
PITHARO	SAWAN RAJAR	BHU SAWAN RAJAR	BASIC HEALTH UNIT
PITHARO	SHAH MARDAN SHAH	BHU GHULAM NABI SHAH	BASIC HEALTH UNIT
PITHARO	AHMED ABAD	DISP AHMED ABAD	DISPENSARY
PITHARO	AMIN MOHD RAJAR	DISP AMIN MOHD RAJAR	DISPENSARY
SAMARO	SAMARO	TALUKA HEADQUARTER HOSPITAL,SAMARO	HOSPITAL
SAMARO	SAMARO	RHC SAMARO	RURAL HEALTH CENTRE
SAMARO	ARARO BHURGARI	BHU ARARO BHURGARI	BASIC HEALTH UNIT
SAMARO	SAMARO ROAD	BHU PIR SIRHANDI	BASIC HEALTH UNIT
SAMARO	ARARO BHURGRI	BHU SALEH BHAMBRO	BASIC HEALTH UNIT
SAMARO	SAMARO ROAD	BHU SAMARO ROAD	BASIC HEALTH UNIT
SAMARO	PADHIRYO FARM	BHU PADHRIYO FORM	BASIC HEALTH UNIT
SAMARO	PADHIRYO FARM	BHU Tobban Vari	BASIC HEALTH UNIT