

# PAKISTAN EMERGENCY SITUATIONAL ANALYSIS



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## A PROFILE OF DISTRICT KASHMORE



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District Kashmore, 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 Kashmir

July 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](http://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, 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 emergency 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 KASHMORE AT A GLANCE

Population 1998 **663,322 persons**



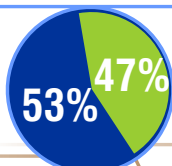
Population Density  
**388 per Sq. Km**

**2.89%**

Average Annual Growth Rate (1981 - 98)



Male  
**550,320**



Female  
**490,000**



Average Household Size  
**5.2**



Sex Ratio **112**  
Males per 100 females

## Administrative Units

Taluka	3
Union Councils	37
Mouzas	177

## Area

**2,682.46**  
Sq. Kms

Rural Population

**255,523**  
**25%**

Urban Population

**784,797**  
**75%**

## Health & Education



Health Facilities **51**



Educational Facilities **1,494**

Literacy Rate  
2012-13  
(10+)

**39%**



Male  
**58%**



Female  
**18%**

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**

## Electoral Representation

Male	<b>198,731</b>
Female	<b>154,885</b>
National Assembly Seat: 1	<b>NA-210</b>
Provincial Assembly Seat: 2	<b>(PS-17, PS-18)</b>

Registered Voters  
**353,616**



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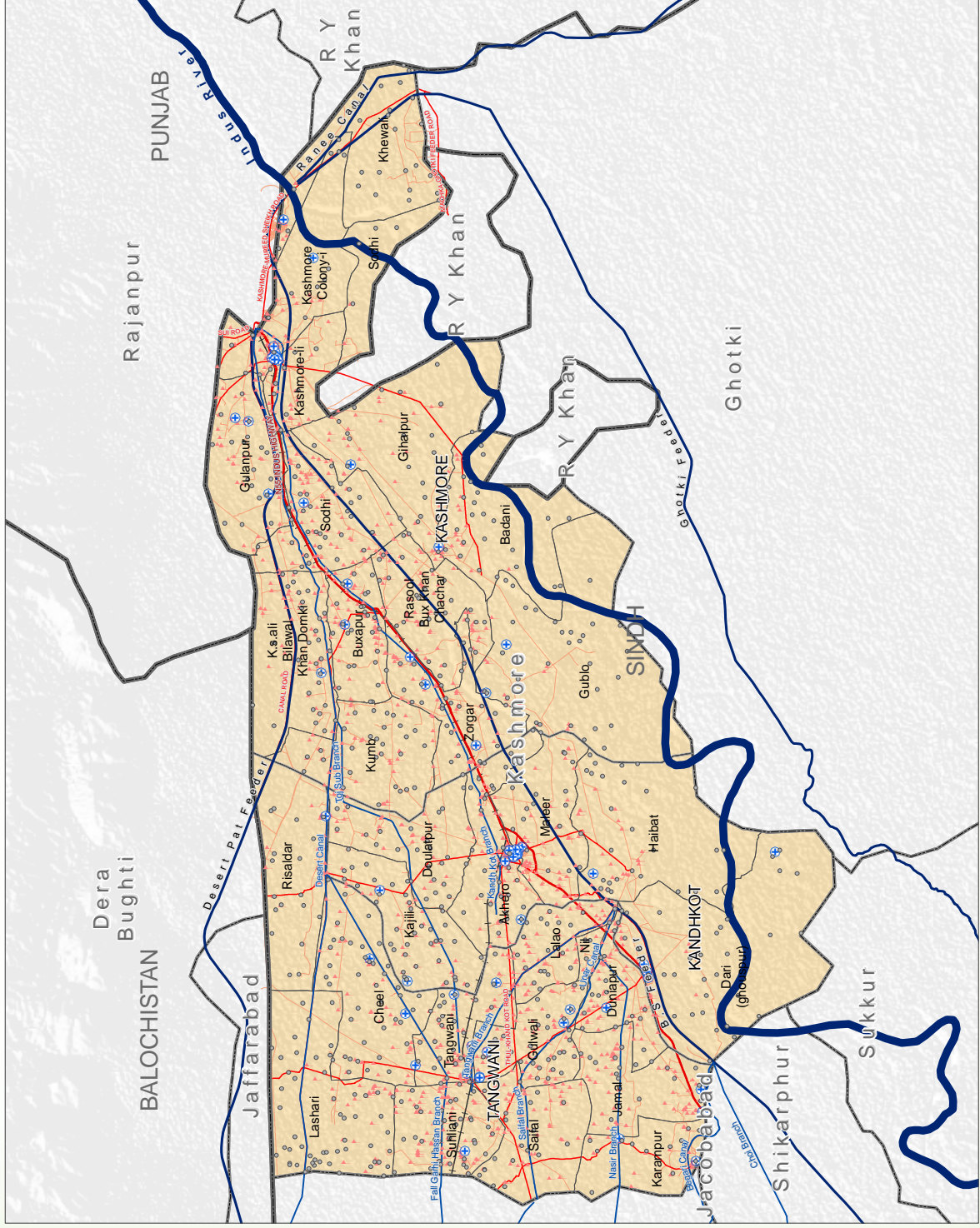
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# Kashmore - Reference Map

July, 2014



**Legend**

- Education Facilities
- Health Facilities
- Settlements
- Indus River
- Canals
- Branch Canals
- Highways
- Regionals
- Streets
- Railway
- Province boundary
- District boundary
- Taluka boundary
- UC boundary

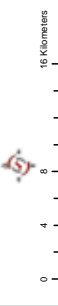
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**Map Doc Name:**  
IMMAP\_PAK\_Kashmore RefMap\_v02\_071814

**Creation Date:**  
July 18, 2014

**Projection/Datum:**  
WGS84

**Web Resources:**  
<http://www.immap.org>



**Map data source(s):**  
Alhassan Systems Private Limited; Admin boundaries, Roads, Railway, Health Facilities, Education Facilities, National Geospatial Agency; Settlements  
Sindh Irrigation and Drainage Authority (SIDA); Rivers, Canals

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## Acronyms

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 Programme
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
UC	Union Council
UNICEF	United Nations Children's Fund
UNOCHA	United Nations Office for the Coordination of Humanitarian Affairs
WFP	World Food Programme
WHO	World Health Organization

# 1 Background Information

## 1.1 Introduction

### 1.1.1 History

The district Kashmore was created on 13-12-2004 by bifurcating district Jacobabad into two parts. Earlier Jacobabad had five talukas, and after bifurcation, three Talukas namely Thull, Garhi Khero and Jacobabad were included in district Jacobabad whereas Kandhkot and Kashmore were included in the district Kashmore. After some time Tangwani was given the status of taluka and the number of talukas of district Kashmore increased from two to three. The Head Quarter of district Kashmore is situated in Kandhkot<sup>1</sup>.

Historically, Talpur dynasty ruled this area. Talpurs are a Baloch tribe settled in Sindh and Punjab. They are descendants of Mir Tala Khan. They arrived in Sindh during the invasion of Nadir Shah. Talpurs settled in northern Sindh, and spoke Sindhi language. Their descendants and allies formed a confederacy against the Kalhora dynasty. Later, however, they enjoyed good relations with the Kalhoras and were invited by them to help organize unruly Baloch tribes living in Sindh. However, the Talpurs gained power by overthrowing the Kalhora after the Battle of Halani. Peace between the two warring tribes was soon established after the Mughal Emperor Akbar Shah II issued a Firman (Royal Dictate) in the year 1783, which designated Mir Fateh Ali Khan Talpur as the new Nawab of Sindh. This brought an end to the ferocious fighting and the defeat of the ruling Kalhora by the Talpur tribes. Talpur dynasty ruled Sindh from 1783 to 1843, and was overthrown by the British East India Company led by General Charles James Napier<sup>2</sup>.

In 1841 A.D. a treaty was signed between the Talpur rulers of Sindh and The East India Company. John Jacob was sent to Khan Garh, in accordance with the treaty. John Jacob established cantonment within the narrow belt belonging to Mirs. The first and the most remarkable thing, John Jacob did was the restoration of peace. This was not possible without properly chastising the outlaws. He dealt with the situation with such a high handedness that soon after his arrival, the plunderers were scared off and were brought under control. When peace was restored it was followed by reclamations and development. Land growers started coming back to cultivate their lands. Businessmen and artisans also followed them. When security was assured, Bazaars started flourishing and the area, where there had been a desert before, it became a trade Centre. The grain market and cattle markets also started functioning in the newly established town<sup>3</sup>.

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<sup>1</sup> A Brief Profile of District Kashmore @ Kandhkot , RADCO, Kandhkot

<sup>2</sup> <http://en.wikipedia.org/wiki/Talpur>

<sup>3</sup> A Brief Profile of Jacobabad, Small & Medium Enterprise development Authority, Larkana



But the local landlords did not always accept the British Rule. In 1857 Dil Murad Khoso and Darya Khan Jakhrani were sent to Kala Pani (a colonial-era prison in Andaman and Nicobar Islands of India) due to their involvement in the freedom movement.

### 1.1.2 Geography

The Headquarter of district Kashmore is situated in Kandhkot. Kashmore district is situated in northern part of Sindh, bordering Ghotki district, Jacobabad district, Shikarpur district and Sukkur district within Sindh. It also borders Balouchistan on the northern side and Punjab on the eastern side. Kashmore is located at the tri-junction, connecting three Provinces, and is a gateway to the Punjab and Balochistan provinces. Because of its distinguished geographical location and cross-road connecting borders with three provinces, Kashmore has a unique identity. The Indus River runs through the Eastern side of Kashmore district. The southeastern side of Kashmore district has forest of Katcha that supports wild animals. The Thar Desert is on the Eastern side of the district, and is home to wild desert animals.

On the east side, this district shares its boundary with district Rajanpur of Punjab; on the west side, it touches district Jacobabad and Shikarpur; on north side, district Dera Bugti of Balochistan; on the south, district Ghotki and Sukkur of Sindh touch this district<sup>4</sup>.

### 1.1.3 Culture (Ethnicity, Religion and Politics)

Like its antecedent, Kashmore has a well-established tribal system in place and is badly neglected in all spheres of life. The culture and tradition of this district are the same as found elsewhere in Sindh. People wear *Shalwar Kameez* and Sindhi cap. The common language spoken in this district is Sindhi whereas, due to large number of Baloch tribes residing in this district, the Second language is Balochi<sup>5</sup>.

The district Kashmore is feudal dominated district. There are more than a dozen sardars of various tribes and castes dwelling in this district. They include Bijarani, Khoso, Malik, Teghani, Sundarani, Mazari, Golo, Mohammadani, Chachar, Jakhrani, Soomro and others. The most influential tribes are Sundrani, Bijarani, Khoso, Mazari and Suhriyani. They are active in politics and have been in assemblies for the last 40 years. They are considered the ruling class of area. Majority of the people are Muslims. Besides, a large number of Sindhi speaking Hindus also reside in this District. The Hindus are well versed in business and have control over the economy of the district. They have monopoly in the district in terms of business.

### 1.1.4 Administrative Division

District Kashmore consists of three talukas named Kashmore, Kandhkot and Tangwani. There are 37 union councils in the district spread over 177 Dehs (villages). There are 145 mouzas (Revenue villages) out of which 131 are rural, 7 are urban, 5 are partly urban and 2 mouzas are un-populated.

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<sup>4</sup> <http://ajmalforum.blogspot.com/2011/12/district-kashmore-profile.html>

<sup>5</sup> A Brief Profile of District Kashmore @ Kandhkot , RADCO, Kandhkot

Table 1.1-1: Administrative Division of District Kashmore

Kashmore	Knungo Circles/ Supervisory Tapas	Patwar Circles/ Tapas	Number of Mouzas				
			Total	Rural	Urban	Partly urban	Forest
Kandhkot taluka	2	8	43	35	3	3	2
Kashmore taluka	3	21	57	54	1	2	
Tangwani taluka	3	15	45	42	3		
<b>TOTAL</b>	8	44	145	131	7	5	2

Source: Mouza Statistics of Sindh 2008, Agriculture Census Organization

### 1.1.5 Road Network Infrastructure

The only major road passing through this district is Indus Highway (N55), which enters in this district from Rajanpur and exits towards Shikarpur having a total length of 73 Km in this district. As far as provincial and local roads are concerned, no authenticated data is available, which can provide details of the road lengths and directions

### 1.1.6 Irrigation

Agriculture, in Kashmore, mainly depends upon canal irrigation. However, river water and tube wells are also used for irrigation. Table 1.1.6.1, given below, shows the total irrigated area of district Kashmore by different modes of irrigation. Out of 136 rural mouzas, 120 (88%) are irrigated with the help of canals. Tube well Irrigation is also common in 33 mouzas that constitutes 24% of the total rural mouzas. River irrigation is also common as 38 mouzas (28%) have reported the river as a *source of irrigation*.

Table 1.1-2: 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/TORRENT
KASHMORE DISTRICT	NUMBER	136	120	38	33	1	-	3	-
	PERCENT	100	88	28	24	1	-	2	-
KANDHKOT TALUKA	NUMBER	38	27	15	2	-	-	-	-
	PERCENT	100	71	39	5	-	-	-	-
KASHMORE TALUKA	NUMBER	56	55	12	31	1	-	3	-
	PERCENT	100	98	21	55	2	-	5	-
TANGWANI TALUKA	NUMBER	42	38	11	-	-	-	-	-
	PERCENT	100	90	26	-	-	-	-	-

Source: Mouza Statistics of Sindh 2008, Agriculture Census Organization

In the year 2008-09, 64% of the net sown area was irrigated and from this irrigated area 99.9% was irrigated through canals and tube wells. From 2008-09 to 2009-10, there is almost 1% increase in canal irrigated area. The table below gives information regarding irrigation in the district.

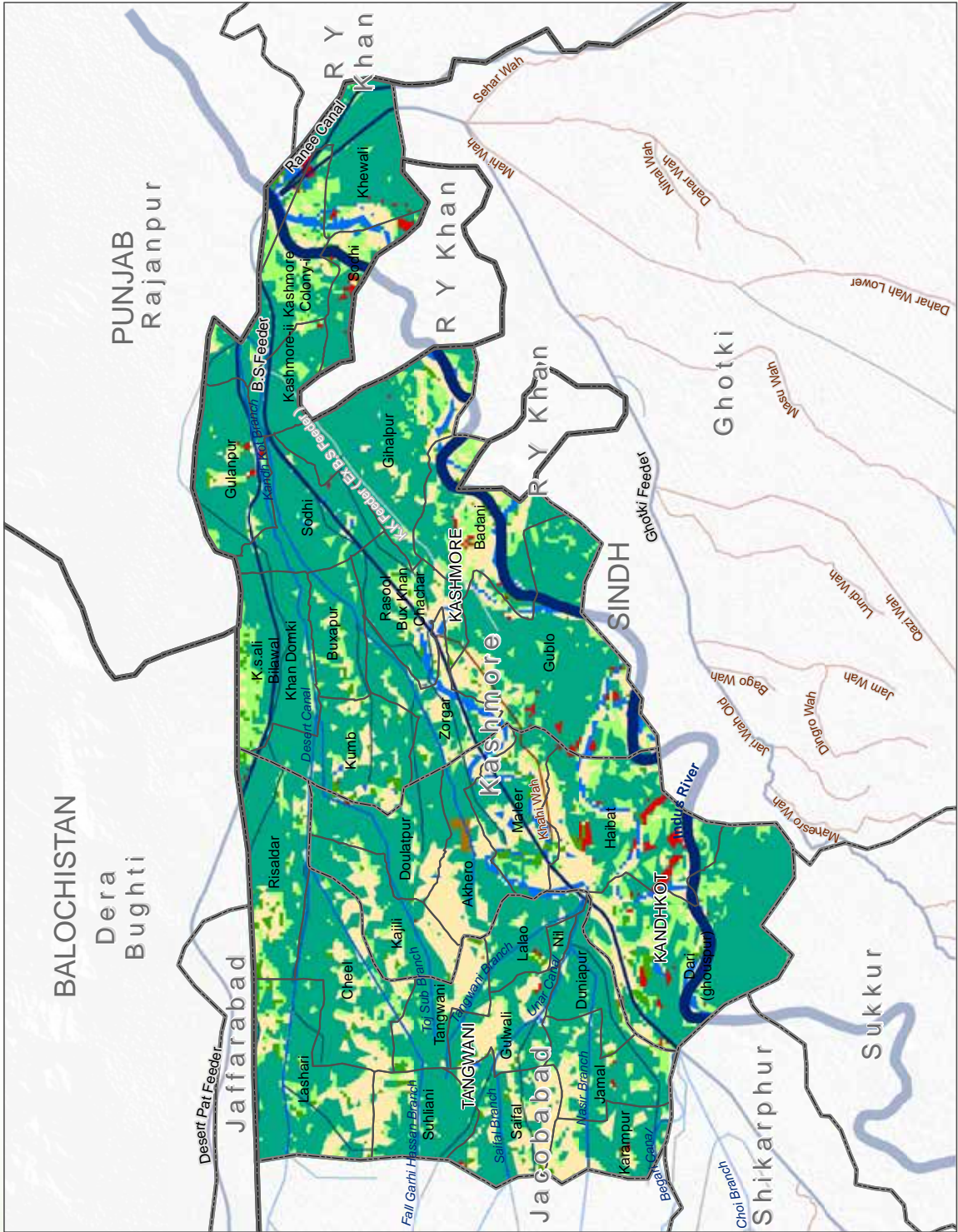
*Table 1.1-3: Irrigation by Type*

<b>Irrigation Type</b>	<b>2008-09</b>	<b>2009-10</b>
Canal	43,920	48,915
Tube well	6,049	6,003
<b>Total Irrigated Area</b>	<b>49,991</b>	<b>54,935</b>
Un-Irrigated	28,529	25,873
<b>Total Sown Area</b>	<b>78,520</b>	<b>80,808</b>

Source: Table 4.36 Sindh Development Statistics 2011

# Kashmore - Irrigation System Map

July, 2014



**Legend**

- Indus River
- Branch Canals
- Canals
- Disty
- Feeder
- Wah
- Province boundary
- District boundary
- Taluka boundary
- UC boundary

**LandCover**

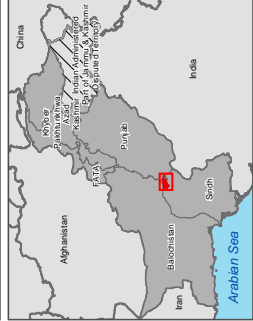
- Irrigated croplands
- Rainfed croplands
- Grassland
- Vegetation
- Bare areas
- Artificial areas
- Water bodies

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Map Doc Name: IMMAP\_PAK\_Kashmore Irrigation System Map\_v02\_071814  
 Creation Date: July 14, 2014  
 Projection: UTM  
 Web Resources: <http://www.immap.org>

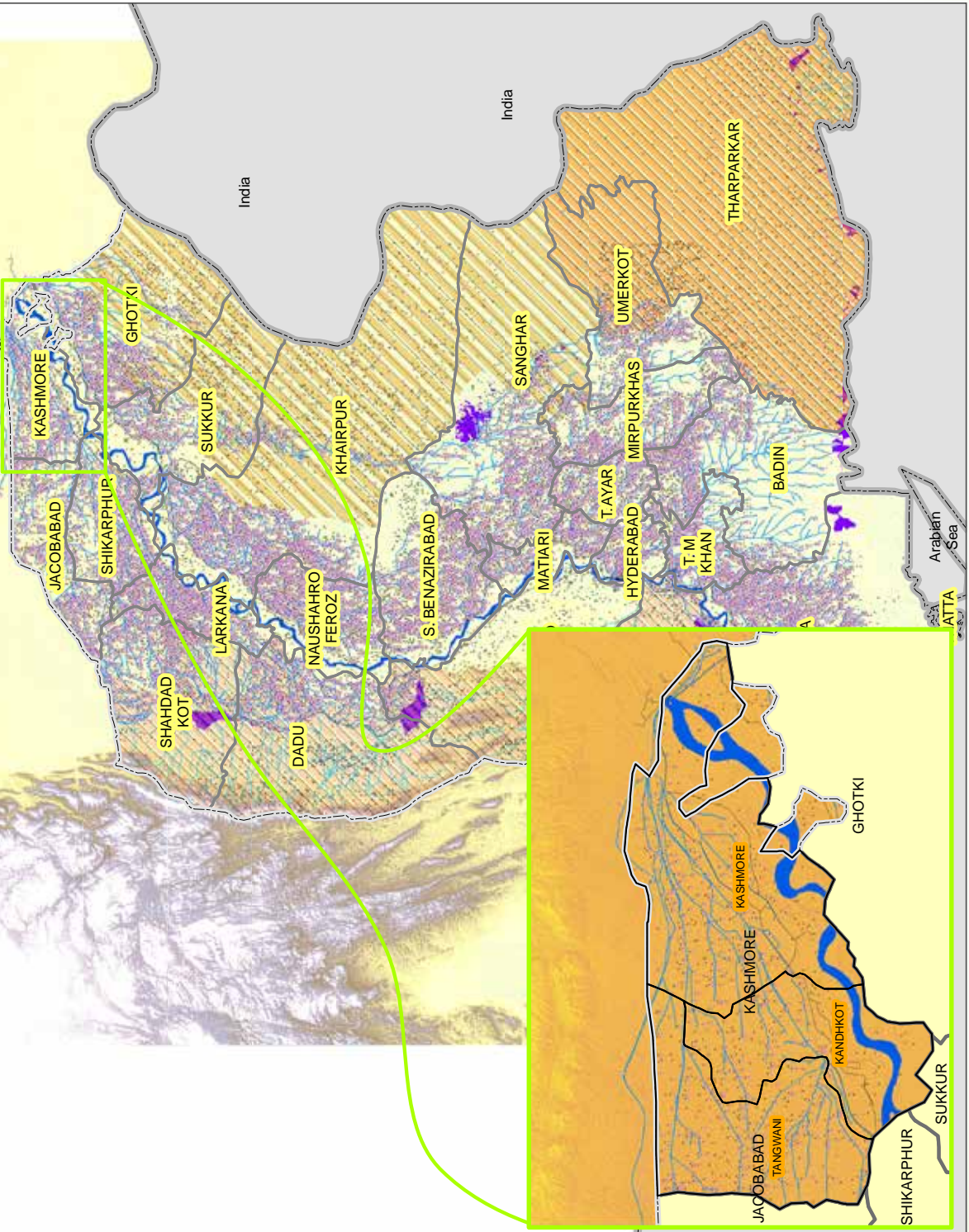
Map data source(s):  
 Data Organization: Admin boundaries  
 Sindh Irrigation and Drainage Authority (SIDA) : Rivers,  
 Irrigation System data  
 Global Land Cover 2009: Land Cover

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## Sindh-Kashmore Surface/ Drinking Water Availability Map Date (July 2014)



**Legend**

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

**IMMAP**  
International Map of the Arabian Sea

**SAHARA SYSTEMS**  
ALASKA SYSTEMS

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### 1.1.7 Solid Waste Management

“Solid Waste Management (SWM) is the generation, separation, collection, transfer, transportation and disposal of waste in a way that takes into account public health, economics, conservation, aesthetics, and the environment, and is responsive to public demands.”<sup>6</sup>

#### **Current Scenario of Solid Waste Management (SWM)**

In district Kashmore, three Taluka administration authorities (TMAs) are responsible for the solid waste management, drainage and sanitation and water supply facilities. Nevertheless, district has poor solid waste management facilities which are depicted due to no proper system for solid waste disposal in the concerned areas.

Likewise other many such districts of Sindh, District Kashmore also has no updated data on solid waste management and even disposal sites allocation. However, certain project reports focusing the water and sanitation (WATSAN) and solid waste management (SWM), as well as, media news and views about the concerned district can be useful for understanding the situation.

The Asian bank report on municipal services shows districts-wise development expenditure on urban water, sewerage and drainage for the district Kashmore about 0-2%, much low as compared to the other districts. Accordingly, comparative percentage of urban population ranges from 21-26% which also has no proper solid waste management, as well as, sanitation facilities.<sup>7</sup>

According to news sources, almost half the taluka municipal administrations (TMAs) of the province which spend billions of rupees annually on provision and maintenance of civic services have flatly refused to provide record of their spending to the Auditor General of Pakistan (AGP). Moreover, when AGP’s officials visited offices of the concerned TMA’s to audit accounts for the financial year of 2011–12, No TMA of all three districts of Jacobabad, Kashmore and Qambar-Shahdadkot handed any record at all to the teams.<sup>8</sup>

The official data regarding the release of remaining (50%) shares for the year (2004-05 and 2005-06) to TMA’s on account of; Water supply, Sanitation and Solid waste management (SWM), by the Govt. of Sindh finance department shows the statistical figures District Kashmore (TMA-Kandhkot) of Rs.1,727,793/year(2004-05) and Rs.1,701,743/year(2005-06) as well as, for TMA-Tangwani Rs.1,669, 618/year (2004-05) respectively.<sup>9</sup>

<sup>6</sup> Journal of Environmental and Occupational Science Environ Occup Sci 2012; 1(2):129-131

<sup>7</sup> ASIAN DEVELOPMENT BANK URBAN MUNICIPAL SERVICES SINDH:DRAFT FINAL REPORT Volume - I, July 2007

<sup>8</sup> <http://www.dawn.com/news/1034567>; News accessed on; July 17, 2014

<sup>9</sup> Govt. of Sindh finance department Karachi /Official newsletter Dated; November 05,2007: Release of remaining (50%) shares for the year (2004-05 and 2005-06) to TMA’s on account of; Water supply, Sanitation and Solid waste management



## 1.2 Demography

### 1.2.1 Population Characteristics

In Pakistan male population is more than the female population. One probable reason of this imbalance could be underreporting of females, due to cultural reasons, during national surveys. Pakistan is among those four countries where life expectancy for female at birth is less than that of males. Sex ratio in Kashmore is 112 males per 100 females, which is more than the ratio at the National level that is 106<sup>10</sup>. There could be other possible reasons for such a difference in male to female ratio, such as i) very high maternal mortality rate<sup>11</sup> (0.5 for Sindh; second highest at the national level) and ii) poor health care at district and province level<sup>12</sup>. District Kashmore is rural by its characteristics like majority of the other districts in Sindh. 75<sup>13</sup> percent of the population resides in rural area and just 25 percent resides in the urban areas.

*Table 1.2-1: Estimated Population of District Kashmore for 2013*

AGE GROUP (IN YEARS)	TOTAL			RURAL			URBAN		
	BOTH SEXES	MALE	FEMALE	BOTH SEXES	MALE	FEMALE	BOTH SEXES	MALE	FEMALE
ALL AGES	1,040,320	550,320	490,000	784,797	416,323	368,474	255,523	133,997	121,527
00 -- 04	181,215	90,043	91,172	139,393	68,931	70,462	41,822	21,112	20,710
05 -- 09	184,193	102,935	81,258	140,461	79,350	61,111	43,732	23,585	20,147
10 -- 14	114,236	69,915	44,321	84,175	52,909	31,266	30,061	17,006	13,055
15 -- 19	91,988	47,051	44,937	66,231	34,185	32,047	25,756	12,866	12,890
20 -- 24	97,916	47,381	50,535	73,762	35,554	38,208	24,154	11,827	12,327
25 -- 29	82,165	40,877	41,288	61,782	30,597	31,185	20,383	10,281	10,102
30 -- 34	66,088	33,886	32,202	49,736	25,230	24,507	16,352	8,657	7,695
35 -- 39	53,305	26,954	26,351	40,306	19,974	20,333	12,998	6,980	6,018
40 -- 44	45,605	23,915	21,690	34,386	18,034	16,352	11,219	5,881	5,338
45 -- 49	34,138	17,105	17,032	25,453	12,517	12,936	8,684	4,588	4,096
50 -- 54	29,222	17,076	12,146	22,526	13,242	9,284	6,697	3,835	2,862
55 -- 59	17,391	8,675	8,716	13,160	6,324	6,835	4,232	2,351	1,881
60 -- 64	18,593	10,944	7,650	14,450	8,709	5,741	4,144	2,235	1,908
65 -- 69	8,695	4,440	4,255	6,586	3,361	3,224	2,109	1,079	1,030
70 -- 74	8,325	5,110	3,215	6,555	4,125	2,430	1,770	985	785
75 & ABOVE	7,245	4,013	3,232	5,834	3,282	2,552	1,411	730	680

Source: Estimated using Table 1 for Sindh census 1998

<sup>10</sup> Labour Force Survey 2010-11: *Pakistan Bureau of Statistics*

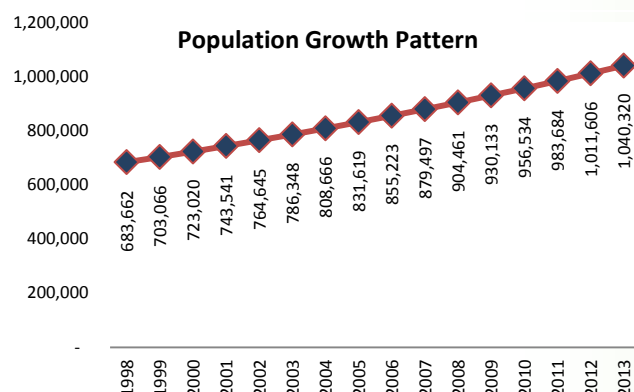
<sup>11</sup> Pakistan Demographic and Health Survey, 2006-07: National Institute of Population Studies, Pakistan. pp. 179

<sup>12</sup> Mean distance from hospital/dispensary is 12 km for Sindh: Pakistan Mouza Statistics, Table 15

<sup>13</sup> Since Kashmore is newly created district so rural urban percentages are derived applying Sindh's percentages excluding Karachi as an outlier (being totally urban)

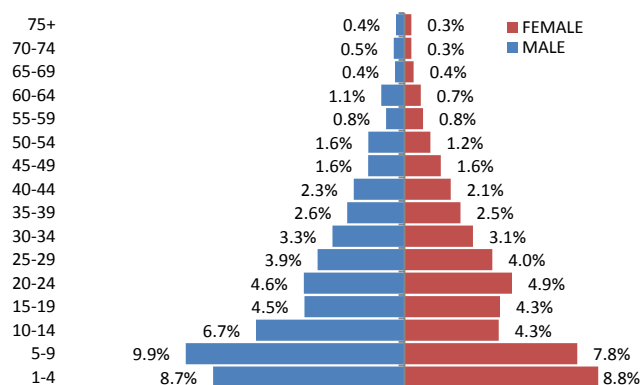
### 1.2.2 Population Growth Pattern

In 1998, the total population of district Kashmore was 663,322<sup>14</sup>. Population of District Kashmore is categorized by a high growth rate of 2.89%<sup>15</sup> per annum which simply means that population will double itself in 24.64 years<sup>16</sup> from 1998. 46.11 percent of the population is below 15 years of age and 2.33 percent is 65 years or above. The estimated population for 2013 is 1,040,319<sup>17</sup> showing a 52.16% increase in 15 years, from 1998.



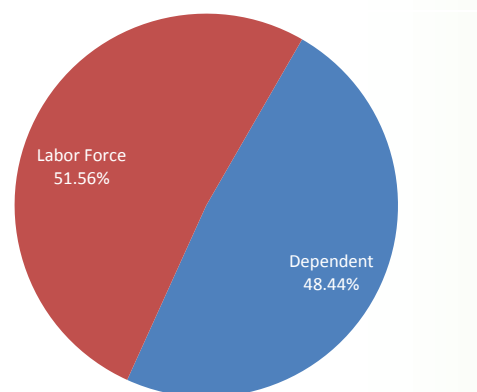
### 1.2.3 Population Distribution by Age and Gender

Out of the total population, 53 percent are males and 47 percent are females. Largest cohort of population is 5-9 years which decreases with 5 years interval. The total of population in this cohort is 184,193. Except age groups 1-4 and 20-24, in all rest of the age groups, male population out numbers 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 Kashmore District is 48.44 percent of the total population. The working population of the district is 51.56



<sup>14</sup> PDMA Sindh

<sup>15</sup> Since District Kashmore is newly created so growth rate is projected backward by adding the population of Taluka's for 1998 as base population and 2010 gridded population (GPW3) as current population.  $R = (P_n/P_o)^{1/n} - 1$

<sup>16</sup> Rule of 70 <http://controlgrowth.org/double.htm>

<sup>17</sup> Gridded Population for World (GPW v3) Center for International Earth Science Information Network (CIESIN), Centro Internacional de Agricultura Tropical (CIAT), 2005

percent only, which shows that dependency ratio<sup>18</sup> in the district is 94 percent.

Table 1.2-2: Population Details by Taluka

Taluka	Population	Male	Female	Pop Density	Sex Ratio	Average HH Size	Estimated HHs
Kashmore	444,874	234,827	210,046	353	112	5.2	85,553
Kandhkot	301,734	159,201	142,533	469	112	5.2	58,026
Tangwani	293,712	156,285	137,427	376	114	5.2	56,483
<b>Total</b>	<b>1,040,320</b>	<b>550,313</b>	<b>490,007</b>	<b>388</b>	<b>112</b>	<b>5.2</b>	<b>200,061</b>

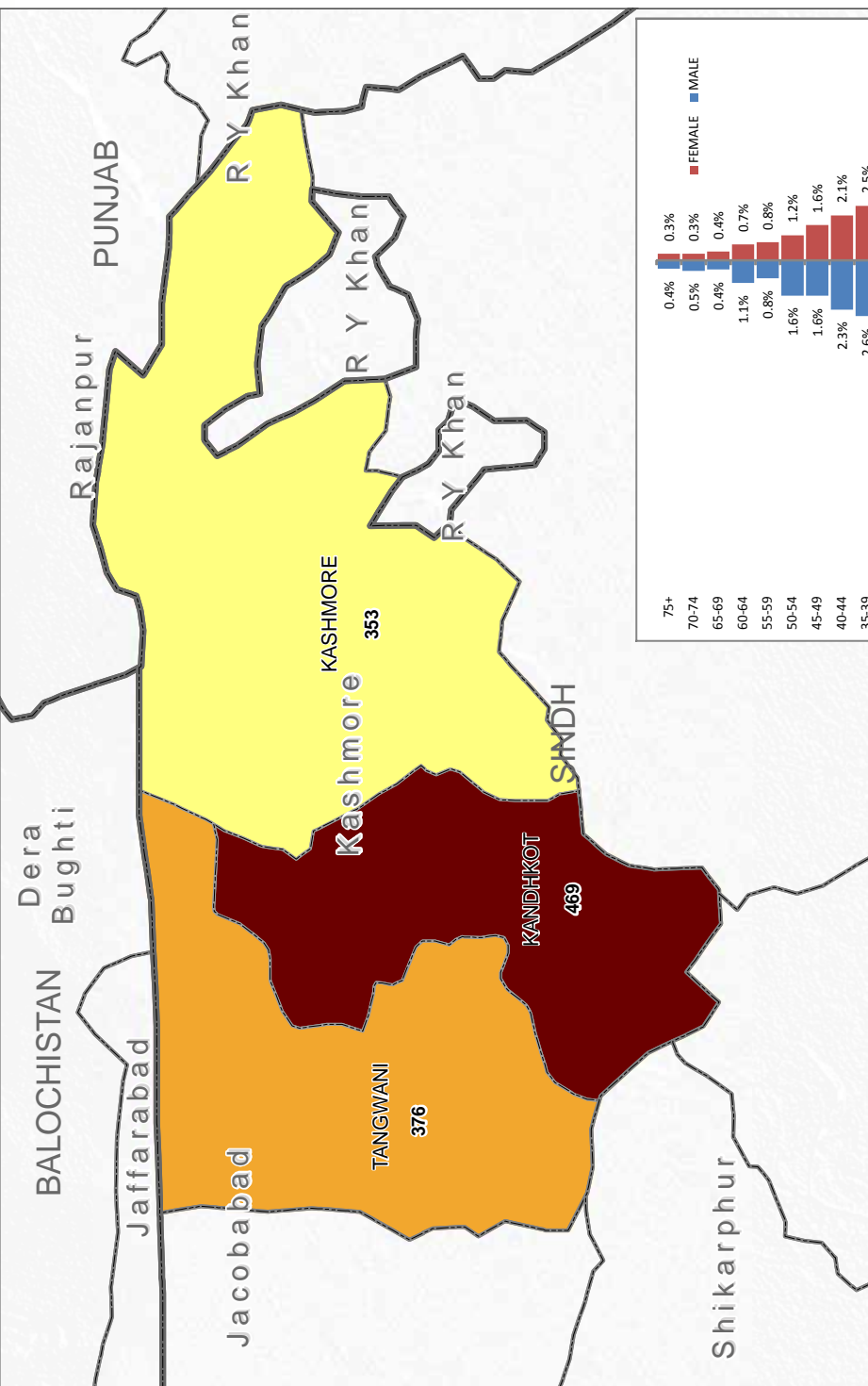
Source: Gridded Population for World (GPW v3) Center for International Earth Science Information Network (CIESIN), Centro Internacional de Agricultura Tropical (CIAT), 2005

Taluka	S.No	Name of UC	Population	Taluka	S.No	Name of UC	Population
	1	Kandhkot-I	24,459		9	Sodhi	36,828
	2	Kandhkot-II	26,097		10	Geehalpur	36,438
	3	Kandhkot-III	25,726		11	Kashmore-I	36,566
	4	Kandhkot-IV	25,339		12	Kashmore-II	32,773
	5	Ghouspur	31,359		13	Colony-I	27,800
	6	Haibat	28,523		14	Khewali	27,555
	7	Dari	26,172		15	Guddu	34,117
Kandhkot	8	Malir	29,142	Total	15		484,874
	9	Akhero	33,349		1	Karampur	28,619
	10	Kajli	26,106		2	Jasmal	26,612
	11	Doulatpur	25,462	Taluka	3	Dunyapur	28,027
TOTAL	11		301,734	Tangwani	4	Lalai	25,944
Kashmore	1	Bakhshapur	31,793		5	Saifal	24,874
	2	Kumb	31,890		6	Gulwali	28,264
	3	Zorgarh	30,857		7	Suhliayani	24,860
	4	Gublo	29,704		8	Cheel	28,715
	5	R.B Chachar	31,038		9	Tangwani	25,865
	6	Badani	33,416		10	Lashari	24,628
	7	Gullenpur	33,685		11	Rasaldar	27,304
	8	KS.Ali Bilawal	30,413	Total	11		293,712
				District Total	1,080,320		

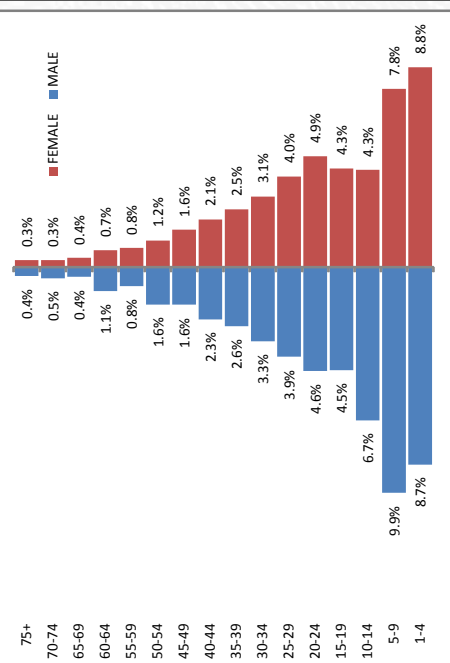
<sup>18</sup> Dependency Ratio= (Population < 15 Years + Population > 65 Years)/ Population 15-65 Years

# Kashmore- Population Density Map

July, 2014



Summary of Estimated population 2013			
Taluka Name	Area (Sq. Km)	Population	Pop.Density (No./Sq.Km)
Kashmore	1,258.76	444,874	353
Kandhkot	643.5	301,734	469
Tangwani	780.2	293,712	376
<b>Total</b>	<b>2,682.46</b>	<b>1,040,320</b>	<b>388</b>



**Legend**

- Province boundary
- District boundary
- Taluka boundary

**Population Density**  
(No. of Persons Per Sq Km)

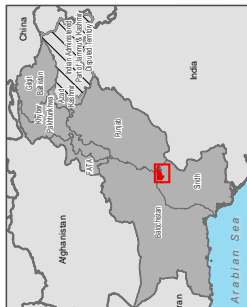
- 0 - 353
- 354 - 376
- 377 - 469

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Map Doc Name: IMMAP\_PAK\_Kashmore Population Density Map\_V02\_071814  
 Creation Date: July 18, 2014  
 Projection/Datum: WGS84  
 Web Resources: <http://www.immap.org>

Map data source(s): National Statistical Service, District Census Report  
 Population Derived from table 1, district census report

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## 1.3 Livelihood

### 1.3.1 Main Sources of Livelihood/Income

Like most other districts of Pakistan, Kashmore is also an agro-based district with majority of the people earning their livelihood through farming (54%) while the second largest group, 27.7%, depends upon casual labour. Only 7.6% of the people are associated with services sector, 3.3% of the people are associated with business while 5% are not doing any type of work. The average income of households (HH) is between Rs. 11,000/- to Rs. 15,000/-<sup>19</sup> per month which is higher than the national monthly per capita income of Rs. 8,960/-<sup>20</sup>.

Crop cultivation is the single largest source of income followed by labour. These two have a combined share of more than two-thirds (77.4%), the rest being shared amongst various sources such as services, business, pension, rent and remittances. Major contributors to off-farm income are Livestock (10.5%), services (5.3%) and business activities (3.4%)<sup>21</sup>.

*Table 1.3-1: Number of Mouzas Reporting Sources of Employment*

GENDER	QUANTIFICATION	SERVICE	AGRICULTURE	TRADE	INDUSTRY	PERSONAL BUSINESS	OVERSEAS EMPLOYMENT	LABOUR
MALE	MOSTLY	5	110	0	0	0	0	5
	SOME	99	23	44	7	116	8	120
	NONE	32	3	92	129	20	128	11
FEMALE	MOSTLY	4	58	1	0	1	0	15
	SOME	55	69	14	5	75	4	87
	NONE	77	9	121	131	60	132	34

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

The above mentioned table reveals the sources of employment for the people of district Kashmore. Out of the 136 rural mouzas, 110 (81%) reported agriculture as the source of employment. The table also shows that casual labour is frequent in this district. Services and personal business are also major source of employment for some of the population. The following graph show this trends in percentages. It can be ascertained that, in the category of mostly and some, for both male and female population; agriculture, labour, services and personal business are the major sources of employment for the people of this district.

<sup>19</sup> Food Insecurity in Pakistan (2009), Sustainable Development Policy Institute (SDPI), Islamabad

<sup>20</sup> Economic Survey of Pakistan (2012), Ministry of Finance, Government of Pakistan

<sup>21</sup> Socio-Economic Baseline Survey of Kashmore District (2010), Rural Support Programme Network (RSPN) Islamabad

### 1.3.2 Agriculture

Majority of the people belong to the farming class and as such depend upon agriculture for their source of income. Their income increases and decreases depending upon the quality of crop and sufficient availability of water for rice Crop, which is considered the cash crop of the district. A grain market has been established in Kandhkot, headquarter of district Kashmore, for the trading of rice and wheat. The grain market of Kandhkot is said to be the second largest grain market in Asia.

The land distribution is highly skewed in this district as 77.9% of the households (HH) do not own any land. Majority of land ownership is in the less than or equal to one acre category, with the average size of landholding being 2 acres per household. 8.3% of the HH own up to 1 acre of land, 5.7% of the HH own 2 to 5 acres, 1.9% own 5 to 12.5 acres and only 0.2% of the HH own 12.5 to 25 acres of land<sup>22</sup>. Resultantly, share cropping and tenant farming is common in this district. Although the literature suggests the mixed effect (positive and negative) of tenant farming and share cropping on agriculture productivity, but in developing countries like Pakistan, given the weak agriculture credit institutions and amenities, such types of farming lowers the agriculture productivity.

Major crops of the district are wheat and rice. The annual production of wheat and rice, over the period 2008-09, was 94.2 (000 Tonnes) and 280.7 (000 Tonnes) respectively. Other crops, such as maize, cotton and sugarcane are also cultivated in the district but at a very minute level. Area sown and production of food and cash crops in 2008-09 are reported in the Table 1.3.2.

*Table 1.3-2: Food and Cash Crops Cultivated in District Kashmore*

Type	Crop	Area Sown in 2008-09 (000 Hectares)	Production in 2008-09 (000 Tonnes)	Area Sown in 2010-11 (Acres) FAO
Food	Wheat	34	94.2	N/A
	Rice	72.8	280.7	181,619
	Jowar	2.1	1.6	N/A
Cash	Sugarcane	0.1	2.5	168
	Cotton	-	-	35

Source: Crop Area and Production by Districts for 28 Years; 2008-09 Pakistan Bureau of Statistics (PBS)

### 1.3.3 Industry

There are several industrial units working in the district Kashmore such as rice mills, flour mills, the Guddu Thermal and Kandhkot gas field. The district Kashmore is the third district in Sindh which has its own gas field and a thermal power station. A large number of local as well as labour belonging to other provinces has been working at the gas field and Guddu Thermal Power Station. The Guddu Thermal Power Station is the second largest power generation Unit in Pakistan. The electricity generated from Guddu thermal power station is supplied to Hyderabad and Karachi along with other cities of Sindh province<sup>23</sup>.

<sup>22</sup> Socio-Economic Baseline Survey of Kashmore District (2010), Rural Support Programme Network (RSPN) Islamabad

<sup>23</sup> A Brief Profile of District Kashmore @ Kandhkot, RADCO, Kandhkot



The business class is associated with the trading business of rice and wheat, cloth, general store, medical stores, and Industrial units such as rice mills and flour mills. They are also the key player in the district as they provide employment to a large number of the working class.

### 1.3.4 Livestock

Livestock is one of the major sub-sectors of agriculture and is the backbone of Pakistan's economy. Its main by-products, including hides and wool, have substantial potential as finished and semi-finished products. Livestock has been a major source of income for the people of Kashmir as it generates 10% of the total income.

Most farmers traditionally keep a few heads of livestock, 2.39 livestock/HH, ranging from bullocks for draft to buffaloes or cattle for milk and poultry for eggs & meat<sup>24</sup>. Kashmir district has vast potential for establishing livestock farming in the district.

*Table 1.3-3: Livestock Population of District Kashmir*

Cattle	Buffaloes	Sheep	Goats	Camels	Horses	Mules	Asses	Poultry
190,872	195,704	138,444	148,022	1,411	2,587	4,089	31,908	519,589

Source: Livestock Census 2006

<sup>24</sup> Socio-Economic Baseline Survey of Kashmir District (2010), Rural Support Programme Network (RSPN) Islamabad

## 1.4 Food Security

Food security can be broadly divided into four components:

- **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

In Kashmore district, wheat and rice is being produced for meeting food requirement as major crops along with other cash crops such as maize, pulses and vegetables. Production of Maize, pulses and vegetables is relatively less in the district as compared to wheat and rice. As the below table shows, wheat and rice are cropped in 100% and 85% of the mouzas respectively. So overall crop based food availability is sufficient in the Kashmore district<sup>25</sup>.

Table 1.4-1: Number of Mouza Reporting Major Crops

ADMINISTRATIVE UNIT	NUMBERS OF MOUZAS REPORTING MAJOR CROPS							
	WHEAT	RICE	COTTON	SUGARCANE	MAIZE	PULSES	ORCHARDS	VEGETABLES
KASHMORE DISTRICT	135	116	-	-	-	12	-	7
KANDHKOT TALUKA	37	20	-	-	-	2	-	-
KASHMORE TALUKA	56	54	-	-	-	9	-	7
TANGWANI TALUKA	42	42	-	-	-	1	-	-

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

Food availability not only depends on the obtainability of wheat but also rests on availability of other cereals like rice, maize etc. Rice is also produced in surplus quantity whereas maize production falls short of the requirement in this district. As far as cereal food is concerned, this district is producing surplus food for the consumption of its residents. However, animal based food availability (meat, milk, milk products) is also important for total food availability. On average, livestock constitutes 31% of the productive assets of each HH. According to a survey, people invest 34% of the micro credits availed on livestock<sup>26</sup>. Such attention towards livestock rearing results in abundant availability of meat and other livestock products. As for as animal based food self-sufficiency is concerned, this district is producing surplus of animal-based food against its requirements. Combining both, crop based and animal based food self-sufficiency, Kashmore is self-sufficient in food availability<sup>27</sup>.

<sup>25</sup> Food Insecurity in Pakistan (2009), Sustainable Development Policy Institute (SDPI), Islamabad

<sup>26</sup> Socio-Economic Baseline Survey of Kashmore District (2010), Rural Support Programme Network (RSPN) Islamabad

<sup>27</sup> *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 not socio-economically accessible to the masses, availability alone cannot make a society food secure. Certain indicators like household income, inflation, child dependency and monthly food expenditures collectively depict the access of food. The average income of households (HH) is between Rs. 11,000/- to Rs. 15,000/-<sup>28</sup> per month, which, according to the food security perspective, is considered as very low. 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 a per capita reduction of socio-economic access to food. Child dependency ratio is high in this district. The share of household expenditures on food is 75% of the total income<sup>29</sup>. So the low level of income, high food expenditures and high inflation (particularly food inflation) hinders access to food.

The following table shows physical access of food in the district Kashmore giving the distance of mouzas from the wholesale markets. Average distance from the fruit and vegetable market of a mouza is 14 kilometres, whereas the distance from the grain market is 12 kilometres. Such long distances impede access to food.

*Table 1.4-2: Distance of Mouzas from Wholesale Markets*

Type of facility		Rural Populated Mouzas	Overall Mean Distance (KM)	Mouzas by Distance (in Kilometers) by Facility				
				Less Than 1	1 - 10	11 - 25	26 - 50	51 & Above
Livestock Market	Number	136	13	2	78	47	8	1
	Percent	100		1	57	35	6	1
Grains Market	Number	136	12	3	81	41	10	1
	Percent	100		2	60	30	7	1
Fruit Market	Number	136	14	2	71	50	11	2
	Percent	100		1	52	37	8	1
Vegetable Market	Number	136	14	2	72	50	10	2
	Percent	100		1	53	37	7	1
Govt. Procurement Centre	Number	136	13	3	75	46	12	
	Percent	100		2	55	34	9	

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 represents this absorption of food and its sustainability. Improved sanitation facilities, clean drinking water, health infrastructure and individual health status along with the female literacy plays vital role in food absorption. According to Food Security Analysis (FSA) 2009, access to improved drinking water is very low in this district. 87% of the HH

<sup>28</sup> Food Insecurity in Pakistan (2009), Sustainable Development Policy Institute (SDPI), Islamabad

<sup>29</sup> *ibid*

use hand pumps which has increased from 84% in the previous reporting period of 2010-11 and 8% use motor pumps (decreased from 10% in 2010-11) as source of drinking water<sup>30</sup>. Female literacy rate is 18% in this district, which is considered as very low.

*Table 1.4-3: Percentage Distribution of HH by Source of Drinking Water*

Kashmore	Water Delivery System				
	Tap Water	Hand Pump	Motor Pump	Dug Well	Other
Total	2	87	8	0	3
Urban	11	41	39	0	9
Rural	0	97	2	0	1

Source: PSLM 2012-13

Also, the sanitation conditions are unsatisfactory in the district Kashmore where 38% of the households use flush toilets and 55% use the non-flush toilets. 7% of the households have no toilet facility.

*Table 1.4-4: Percentage Distribution of HH by Type of Toilet*

Flush			Non-Flush			No Toilet		
Urban	Rural	Total	Urban	Rural	Total	Urban	Rural	Total
91	28	38	7	64	55	2	8	7

Source: PSLM 2012-13

Moreover, in district Kashmore, 70% of the population is poor and the poverty gap ratio is 30.65%, which is alarmingly high<sup>31</sup>. Such high poverty and the high inflationary pressures, particularly food inflation, low level of HH income push the households towards food insecurity. Combining all the indicators of food security i.e, availability, access, utilization and stability; it can be ascertained that district Kashmore is a food insecure district of Pakistan.

<sup>30</sup> Food Insecurity in Pakistan (2009), Sustainable Development Policy Institute (SDPI), Islamabad

<sup>31</sup> Poverty Gap Ratio is defined as average of the ratio of the poverty gap to the poverty line. It is expressed as a percentage of the poverty line for a country or a region. Poverty gap index is a percentage between 0 and 100%. A theoretical value of zero implies that all the extremely poor people are exactly at the poverty line.

## 1.5 Health and Immunization

### 1.5.1 Health Facilities

Following table provides information of the health facilities in Kashmore District.

*Table 1.5-1: Number of Health Facilities by Type*

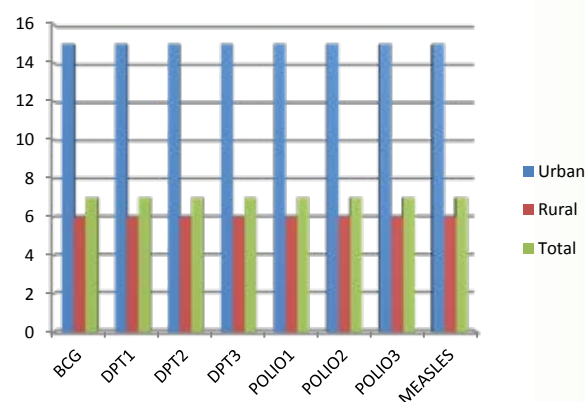
Type	Number	Bedding Facility
Teaching hospitals	0	0
District headquarter hospital	0	0
Tehsil headquarter hospitals	2	40
Rural health centres	4	24
Basic health units	25	50
Govt. rural dispensaries	17	-
MCH centres	2	-
Sub health centres	1	-
<b>Total</b>	<b>50</b>	<b>114</b>

Source: Technical Resource Facility Pakistan

### 1.5.2 Immunization

Immunization coverage estimates are used to monitor immunization services, and to guide disease eradication and elimination efforts. This indicator is a measure of the percentage of children under one-year (i.e. <12 months) of age who have received all the doses of BCG vaccine, three doses of polio & pentavalent vaccines and 1 dose of measles vaccine in a given year.

In district Kashmore, around 44% pregnant women have received tetanus toxoid injections. In urban areas this percentage is 55% and in rural areas it is 43%<sup>32</sup>. Record based<sup>33</sup> immunization data of district Kamber shows that 7% (Male 1%: Female 11%) of the children, aged 12-23 months, have received full immunization. In urban areas this percentage is 15 percent (Male 10%: Female 22%) and in rural areas it is 6% (Male 0%: Female 10%). The corresponding graph shows the percentage of children of 12-23 months that have been immunized by the type of Antigen based on records<sup>34</sup>.



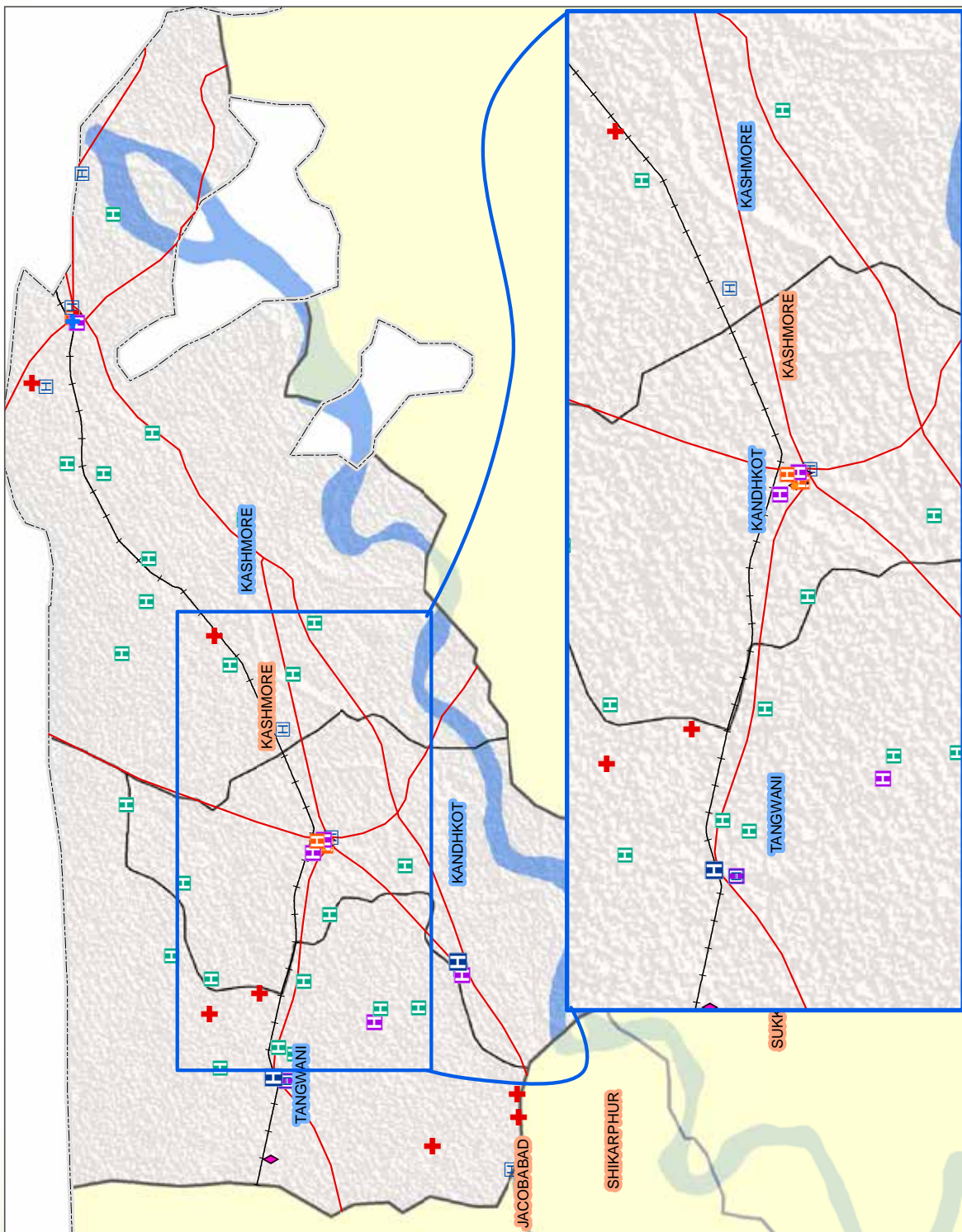
<sup>32</sup> Table 3.11, Pakistan Social and Living Standards Measurement Survey (PSLM) 2012-13

<sup>33</sup> 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'

<sup>34</sup> Table 3.5: Pakistan Social and Living Standards Measurement Survey (PSLM) 2012-13

# Sindh-Kashmore Health Facilities Map

Date (July 2014)



**Legend**

- BASIC HEALTH UNIT (Green 'H')
- DISPENSARY (Red cross)
- FAMILY WELFARE CENTER (Blue 'H')
- GENERAL HOSPITALS (Purple 'H')
- GENERAL PHYSICIAN (Pink diamond)
- MATERNITY HOME (Orange 'H')
- MCH CENTRE (Blue 'H')
- MEDICAL STORES (Blue star)
- RURAL HEALTH CENTER (Blue 'H')
- Road Network (Red line)
- River Indus (Blue line)
- Tehsil Boundary (Black line)
- District Boundary (Thick black line)
- Provincial Boundary (Grey line)
- International Boundary (Dashed grey line)

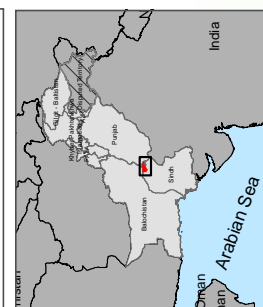
IMMAP - Solutions in Time ALHUSAN SYSTEMS

**Map Doc Name:** IMMAP\_Pakistan\_Kashmore\_Health Facilities Map\_AE\_140714  
**Creation Date:** 14/07/14  
**Projection/Date:** WGS 1984  
**Web Resources:** <http://www.immap.org>

0 5 10 Kilometers

Map data source(s): (Boundaries, Health Facilities, Railway tracks) National Geo-Spatial Agency (settlements) / Pakistan Census Organization

Disclaimers: The designations employed and the presentation of the material in this map do not imply the expression of any opinion whatsoever on the part of the IMMAP, Alhusan Systems, or USAID concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries.





## 1.6 Education

### 1.6.1 Some Highlights

Literacy Rate (10 years and above)	39%
Adult Literacy Rate (15 years and above)	36%
GPI Primary	0.47
GPI Middle	1.26
GPI Secondary	0.67
GPI Higher Secondary	0.42
Population that has ever attended School	38
Male	58
Female	18
Population that has completed primary level or higher	32
Male	50
Female	14
Student Teacher Ratio	40
Primary	41
Middle	36
Secondary	38
Higher Secondary	44

Source: District Education Profile Kashmore 2012-13, PSLM 2012-13

### 1.6.2 District School Enrolment Ratio

The education status is quite poor in Kashmore. The overall literacy rate (for the population of 10 years and above) for the district is 39% (male: 58% and female: 18%). For the urban rural comparison, urban literacy rate is higher than the rural. Among urban community Literacy rate is 61% while literacy rate for male is 75 % and for female it is 44%; whereas the rural literacy rate is 34%, and in rural community, literacy rate for male is 54% and for female it is 13%. Adult literacy rate (for the population of 15 years and above) is 36%. Gross Enrolment Ratio<sup>35</sup> (GER) for the primary level in Kashmore is 54% (Male: 69%, Female: 39%). In the urban community GER is 75% (Male: 74%, Female: 77%) and in the rural community it is 50% (Male: 68%, Female: 33%). Net Enrolment Ratio<sup>36</sup> (NER) for the primary level is 41% (Male: 51%, Female: 30%). In the urban community it is 58% (Male: 58%, Female: 59%) and in the rural community it is 38% (Male: 50%, Female: 25%). Table 1.6.1 shows details of Gross and Net Enrolment Rates by Rural and Urban Gender at different levels

<sup>35</sup> Total enrolment in a specific level of education, regardless of age, expressed as a percentage of the eligible official school-age population corresponding to the same level of education in a given school year.

<sup>36</sup> 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	Matric	Primary	Middle	Matric
			Group (10-12)	Group (13-14)	Group (5-9)	Group (10-12)	Group (13-14)
Urban	Male	74%	66%	70%	58%	33%	22%
	Female	77%	42%	34%	59%	14%	19%
	Total	75%	54%	53%	58%	24%	20%
Rural	Male	68%	41%	41%	50%	19%	7%
	Female	33%	12%	10%	25%	8%	3%
	Total	50%	27%	29%	38%	14%	5%
Total	Male	69%	45%	46%	51%	21%	9%
	Female	39%	17%	15%	30%	9%	6%
	Total	54%	31%	33%	41%	15%	8%

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

### 1.6.3 Gender and Level Wise Details

The total enrolment of District Kashmore is 134,009. While the total female enrolment is 45,549, the total enrolment of males is 88,460. Out of a total of 3,317 teachers, 2,865 are male and 452 are female teachers. This implies that one teacher is teaching averagely 40 students. In district Kashmore, the total boys' schools are 333, total female schools are 194 and the mixed gender schools are 967. Thus the total number of schools is 1,494. This means that averagely every school has an enrolment of 89 students and a teaching staff of around 2<sup>37</sup>.

#### Primary

The total numbers of primary level schools that are reported are 1,392. The total enrolment at the primary level is 89,581. Gender wise 60,882 are boys and 28,699 are girls. Total numbers of teachers, at the primary level, are 2,206, out of which 1,901 are male and 305 are female teachers. Thus on an average each primary school has an enrolment of 64 students with a teaching staff of 2. However the student class ratio is 59 and each school has averagely around 1 class rooms.

#### Middle

Reportedly, there are, in total, 53 middle schools in the district. The total enrolment at the middle level is 6,952, of which 3,079 are boys' enrolment, whereas, the girls enrolment is 3,873. The total number of teachers at the middle level is 191, out of which 155 are male teachers, while, 36 are female teachers. Thus, on an average, each middle school has an enrolment of 131 students with a teaching staff of 4. However, the student class ratio is 48 and each school has averagely around 3 class rooms.

<sup>37</sup> Statistical Education Bulletin, Reform Support Unit, Sindh Government.

### Matric

There are, in total, 39 secondary schools. The total enrolment at the secondary level is 18,372, of which 11,011 are boys' enrolment whereas 7,361 are girls' enrolment. The total number of teachers at the secondary level is 481, out of which male teachers are 419 and female teachers are 62. Thus, on an average, each secondary school has an enrolment of 471 students with a teaching staff of 12. However, the student class ratio is 54 and each school has averagely around 9 class rooms.

### Higher Secondary

There are, in total, 10 higher secondary schools. The total enrolment at the higher secondary level is 19,104, out of which 13,488 are boys' enrolment and 5,616 are girls' total enrolment. The total number of teachers at the higher secondary level is 439, out of which 390 are male teachers and 49 are female teachers. Thus, on an average, each higher secondary school has an enrolment of 1,910 students with a teaching staff of 44. However, the student class ratio is 66 and each school has averagely around 10 class rooms.

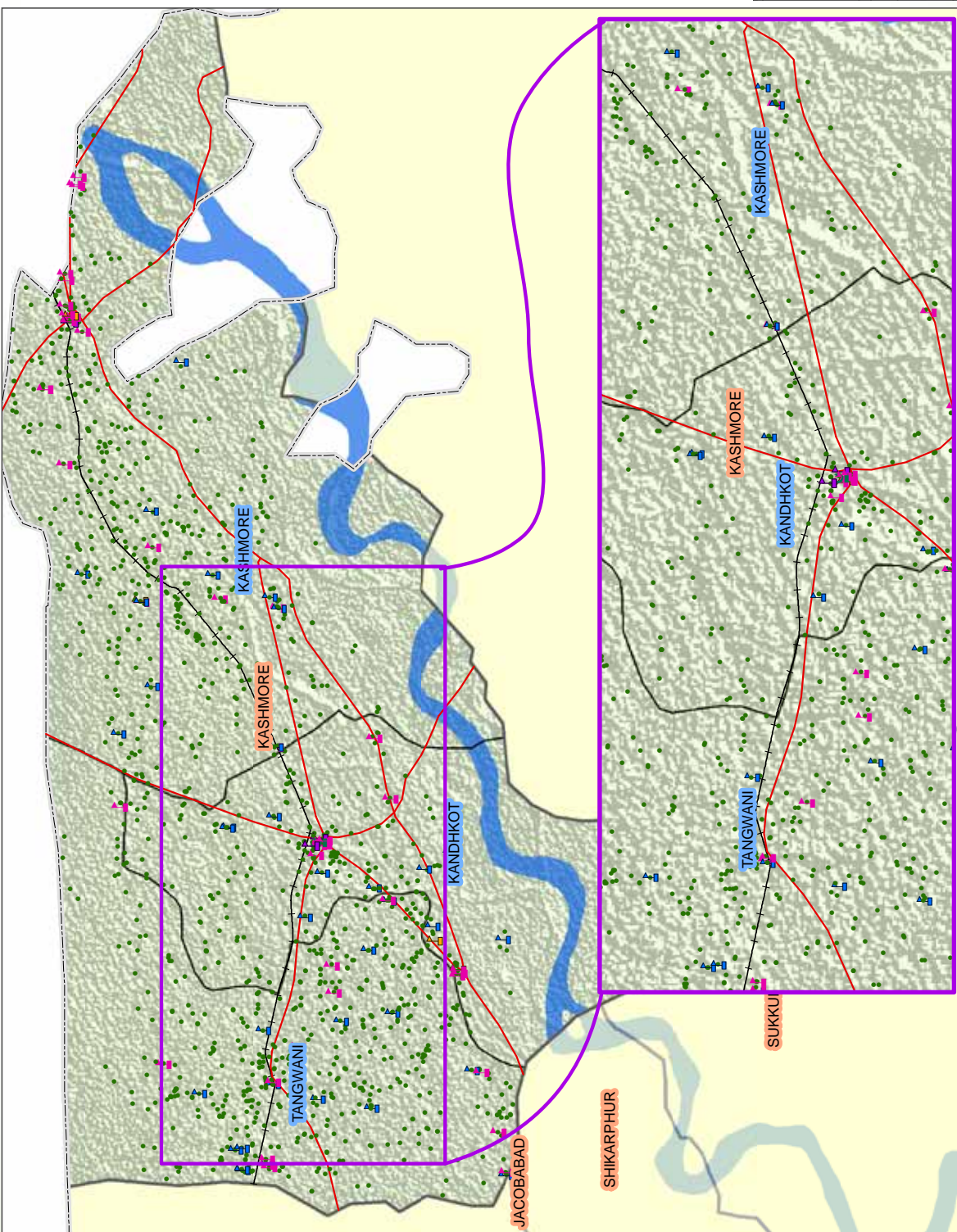
*Table 1.6-2: Enrolment and Educational Facilities by level and Gender*

Level	Enrolment				School Facilities				Teachers		
	Boys	Girls	Mixed	Total	Boys	Girls	Mixed	Total	Male	Female	Total
Primary	14,067	8,551	63,190	<b>85,808</b>	412	192	819	<b>1,423</b>	1,916	323	2,239
Middle	421	468	2,854	<b>3,743</b>	6	12	29	<b>47</b>	182	24	206
Secondary	4,292	909	2,490	<b>7,691</b>	9	3	11	<b>23</b>	310	19	329
Higher Secondary	3,875	1,721	4,935	<b>10,531</b>	3	1	5	<b>9</b>	262	15	277
Total	<b>22,655</b>	<b>11,649</b>	<b>73,469</b>	<b>107,773</b>	<b>430</b>	<b>208</b>	<b>864</b>	<b>1,502</b>	<b>2,670</b>	<b>381</b>	<b>3,051</b>

Source: District Education Profile Kashmore 2012-13

# Sindh-Kashmore Educaiton Facilities Map

Date (July 2014)



**Legend**

- COLLEGE
- HIGH SCHOOL
- HIGHER SECONDARY
- MASJID SCHOOL
- MIDDLE
- PRIMARY
- Road Network
- River Indus
- Tehsil Boundary
- District Boundary
- Provincial Boundary
- International Boundary

IMMAP  
SINCE 1994  
ADMINISTRATIVE SYSTEMS

**Map Doc Name:** AMLP-Pakistan\_Kashmore\_Educational\_Facilities\_Map\_A4L\_14p14  
**Creation Date:** 14/07/2014  
**Project Duration:** 14/07/2014  
**Web Resources:** <http://www.immap.org>

0 5 10 Kilometers

Map data source(s):  
 Ahlison Pvt. Limited (AdminBoundaries, Education Facilities)  
 Pakistan Census Organization

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## 2 Disaster History and Its Impact

### 2.1 Disaster in Kashmore

#### 2.1.1 Disaster History

Kashmore district was carved from Jacobabad in 2004. It was first hit by floods in 2010, then in 2011 and now again in 2012. The extent of damage was higher in 2010 wherein a population of 455,000 was affected. The relative severity of floods was ranked as high in district Kashmore. River Indus, after receiving water from 5 of its tributary rivers, causes floods in the northern and southern parts of Sindh province. The upper regions of Sindh Province comprise of the districts of Kashmore, Shikarpur, Jacobabad, Larkana and Kambar Shahdadkot on the right bank of River Indus and Ghotki, Sukkur, Khairpur, Naushahroferoze and Shaheed Benazirabad on the left bank of River Indus. These districts on the right and left of River Indus are prone to a severe threat when River Indus is in high flood.

Heavy rains are also a major cause of flooding in the district. Vulnerable UCs of Kashmore are Khewali, Colony-I, Kashmore-2, Geehalpur, Gublo, Badani, R.B.Chachar, Gulanpur, Sodhi, Kumb, Buxapur, K.S.A. Bilawal, Zoregarh, Dari, Haibat, Maheer, Akhero, Daulatpur, Kajli, Karampur, Jamal, Duniapur, Saifal, Gul Wali, Lalao, Tangwani, Lashari, Rasaldar, Cheel, Suhliyani<sup>38</sup>. Along with the aforementioned floods, epidemics, casualties from accidents and environmental degradation occur on yearly basis. Vulnerable points of the district are J-head Guide Spur, KK Link Bund RD-79 Mile 0/7 to 1/3, KK Bund Mile 18/0 to 18/6, KK Bund Mile 20/0 to 24/6, S.B Bund Mile 30/0 to 33/0, S.B Bund Mile 11/6 to 15/0, S.B Bund Mile 0/0 to 4/6, Haibat Bund Mile 17/3 to 19/2, Tori Bund Mile 2/5 to 3/4, Kashmore Bund Mile 19/2 to 21/6, Gouspur Bund (Old) Mile 10/0 to 11/4 and Gouspur Bund (New) Mile 0/0 to 04.

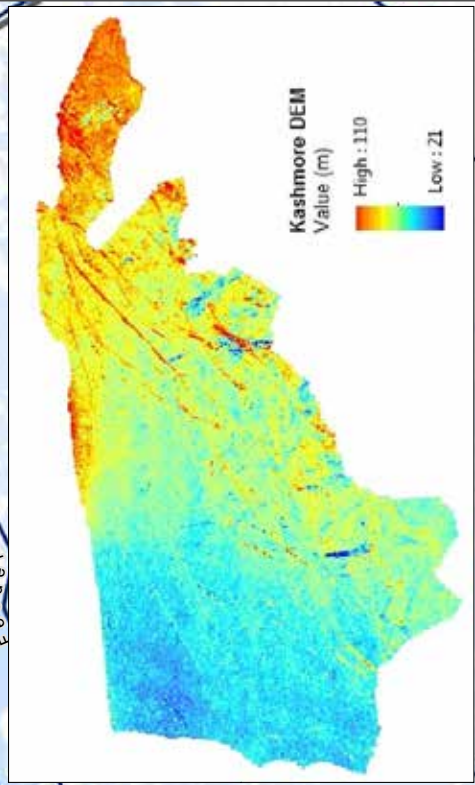
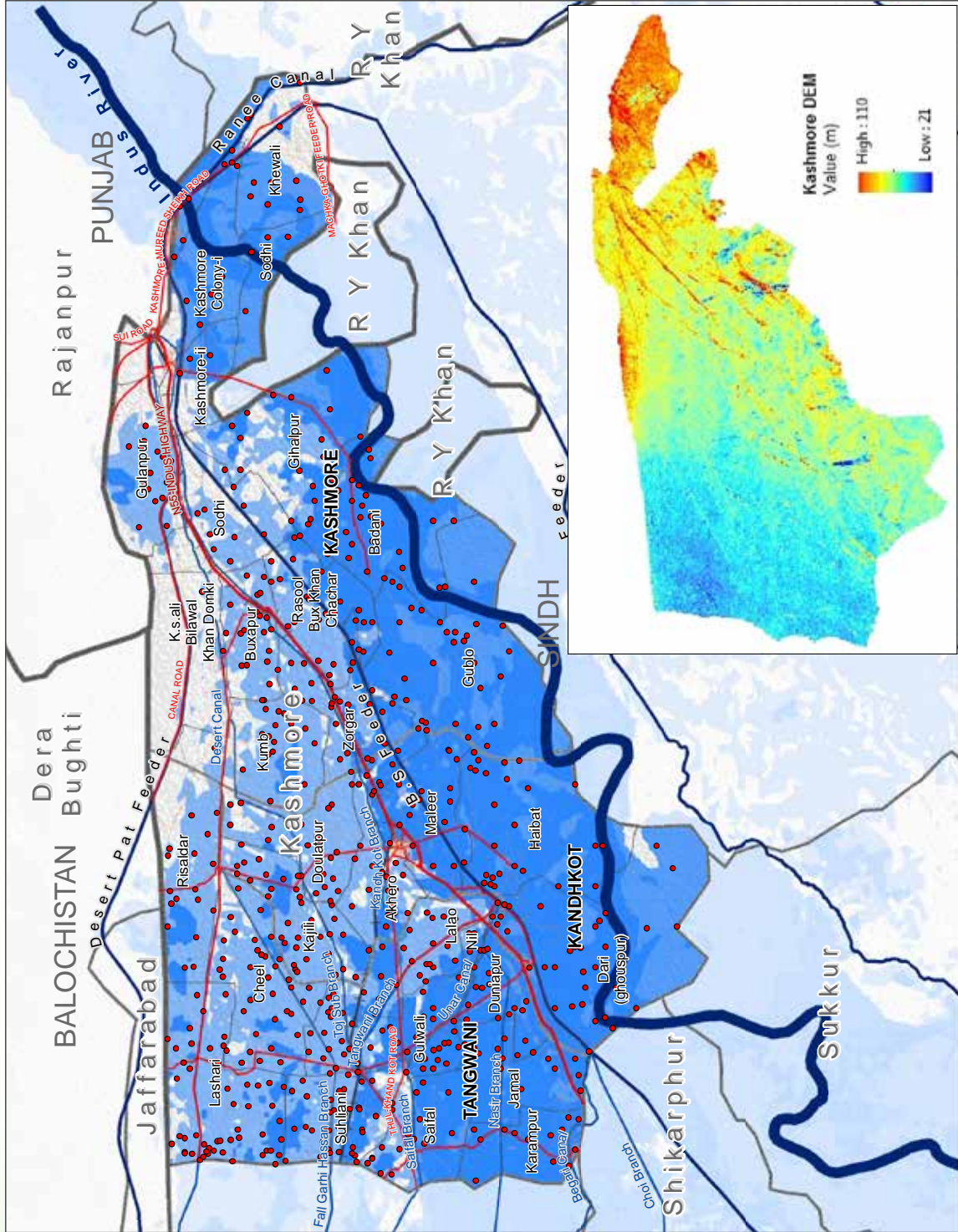
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<sup>38</sup> Sindh Contingency Plan 2012.



# Kashmore - Risk Analysis Map

July, 2014



**Legend**

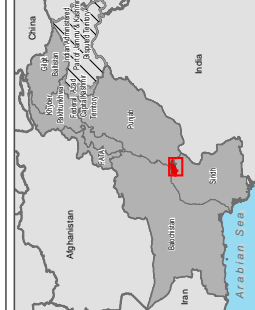
- Settlements at risk
- Settlements
- Highways
- Regionals
- Streets
- Railway
- Indus River
- Canals
- Branch Canals
- Maximum Flood Risk (2010-12)
- Province boundary
- District boundary
- Taluka boundary
- UC boundary

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Map Data Source:  
IMMAP JAK\_Kashmore Risk Analysis Map\_v02\_071814  
Creation Date:  
July 18, 2014  
Projection/Datum:  
WGS84  
Web Resources:  
<http://www.immap.org>

Map data source(s):  
Alhassan Systems Private Limited : Admin boundaries,  
Roads, Railway Line  
National Geospatial Agency, Settlements  
National Geospatial Agency, Rivers  
Canals, Branch and Drainage Authority (SIDA) : Rivers,  
MODIS Maximum Flood Extent  
ASTER G-DEM: Digital Elevation Model

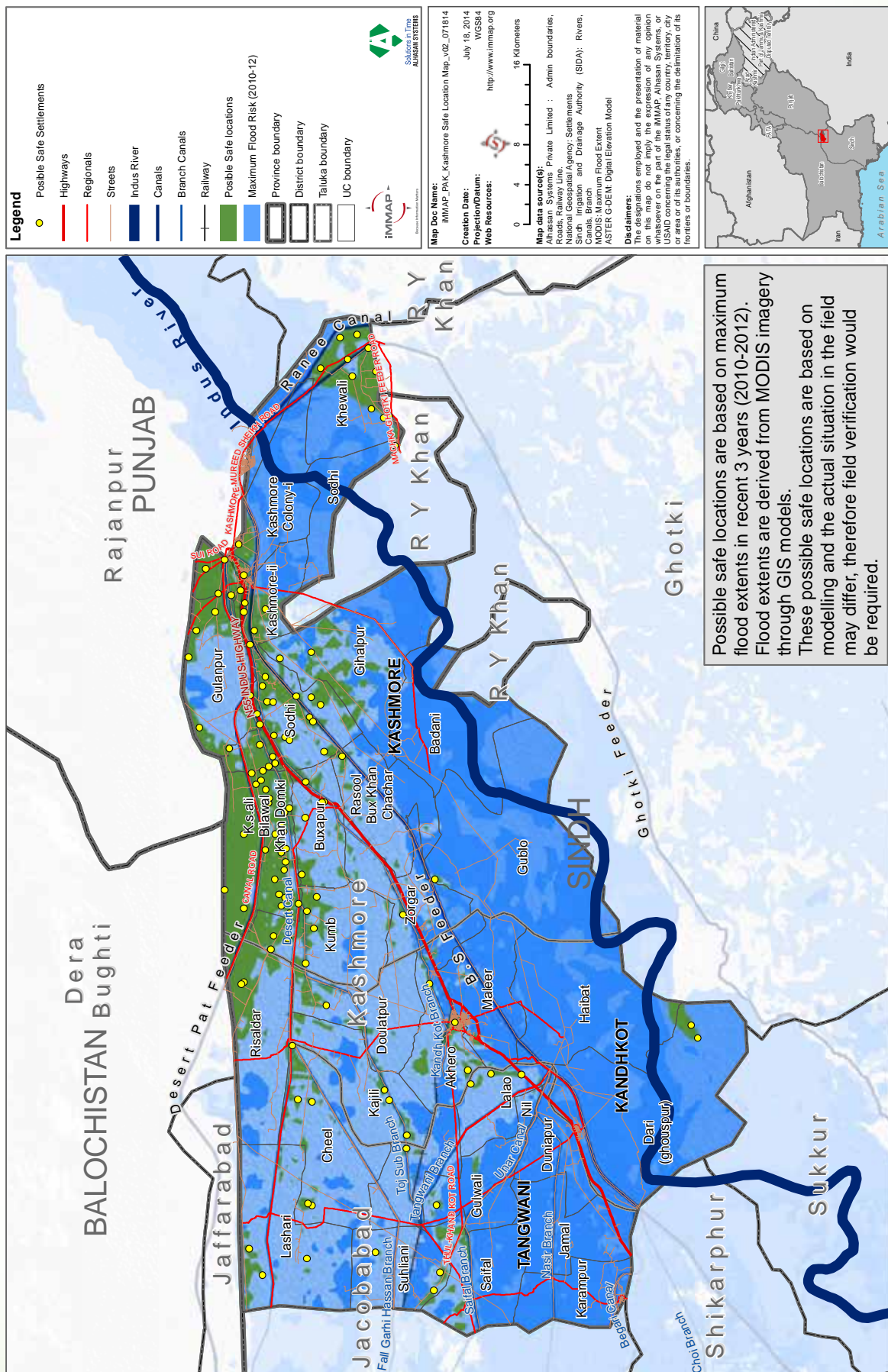
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# Kashmore - Possible Safe Locations Map

July, 2014





## 2.1.2 Demography

Kashmore district is unfortunate in the sense that it was consecutively hit by heavy floods both in 2010, 2011, and now in 2012. In 2010 floods<sup>39</sup>, 61 revenue villages of 17 union councils, in all the 3 talukas, were affected. A population of 615,000 (PDMA Figures - the DCO reported 455,000) persons was affected and there were 9 casualties and 14 injuries. 17,500 cattle head were also affected. According to the DCO, a total of 75,621 houses were affected but the PDMA reported that 93,182 houses were affected. According to the PDMA, of the affected houses, 75,545 were kacha houses and 18,636 were pakka houses. The government facilitated 168,568 persons in its relief camps. 455,624 acres of land was inundated and 400,124 acres of crop area affected. The 2011 floods, as compared to 2010, have affected Kashmore district to a lesser extent in which 12,616 persons and 105 villages/settlements of 30 UCs in 3 talukas were affected<sup>40</sup>. In total 4 casualties and 3 injuries were reported during floods 2011. Population of 75 people was affected and 30 houses were destroyed. 4 cattle head perished and 14,532 acres of crop area were damaged. Table 2.2.1 shows the losses and damages summary.

*Table 2.1-1: Summary of Losses and Damages<sup>41</sup>*

Attribute	Figure 2011	Figure 2010	Source
Total Households 2010		138,115	Estimated
Affected Households	2,102	75,833	
Total UCs		37	PDMA
UC Affected	30	17	NDMA/OCHA
Total Revenue Villages		177	PDMA
Villages Affected	105	17	NDMA
Total Houses Affected	1,620	117,879	NDMA
Partially Damaged	750	n/a	
Destroyed	870	n/a	
Kacha	n/a	75,545	OCHA/PDMA
Pakka	n/a	18,636	
Total Population		828,687	Estimated
Affected Population	12,610	455,000	PDMA/NDMA
Death	4	9	NDMA
Injuries	3	14	
Total Area		662,858	Calculated
Total Affected Area	29,280	455,624	NDMA/OCHA
Crop Area Affected	14,532	400,124	

<sup>39</sup> District Profile Kashmore as of December 2010, UNOCHA

<sup>40</sup> NDMA Losses and Damages Data as of 30<sup>th</sup> November 2011

<sup>41</sup> Summary of NDMA Losses and Damages Data as of 30<sup>th</sup> November 2011 and UN OCHA District Shikarpur Profile as on 19 January 2011

*Table 2.1-2: Summary of Losses and Damages by Taluka for 2010*

Taluka	Total Population	Affected Population	Total Area (Km2)	Affected Area (KM <sup>2</sup> )	Total Ucs	Affected Ucs
Kashmore	384,880	182,000	1,259	808	15	2
Kandhkot	207,125	159,250	644	666	11	4
Tangwani	236,682	113,750	780	369	11	11
Total	828,687	455,000	2,682	1,843	37	17

Source: UNOCHA 2010-11

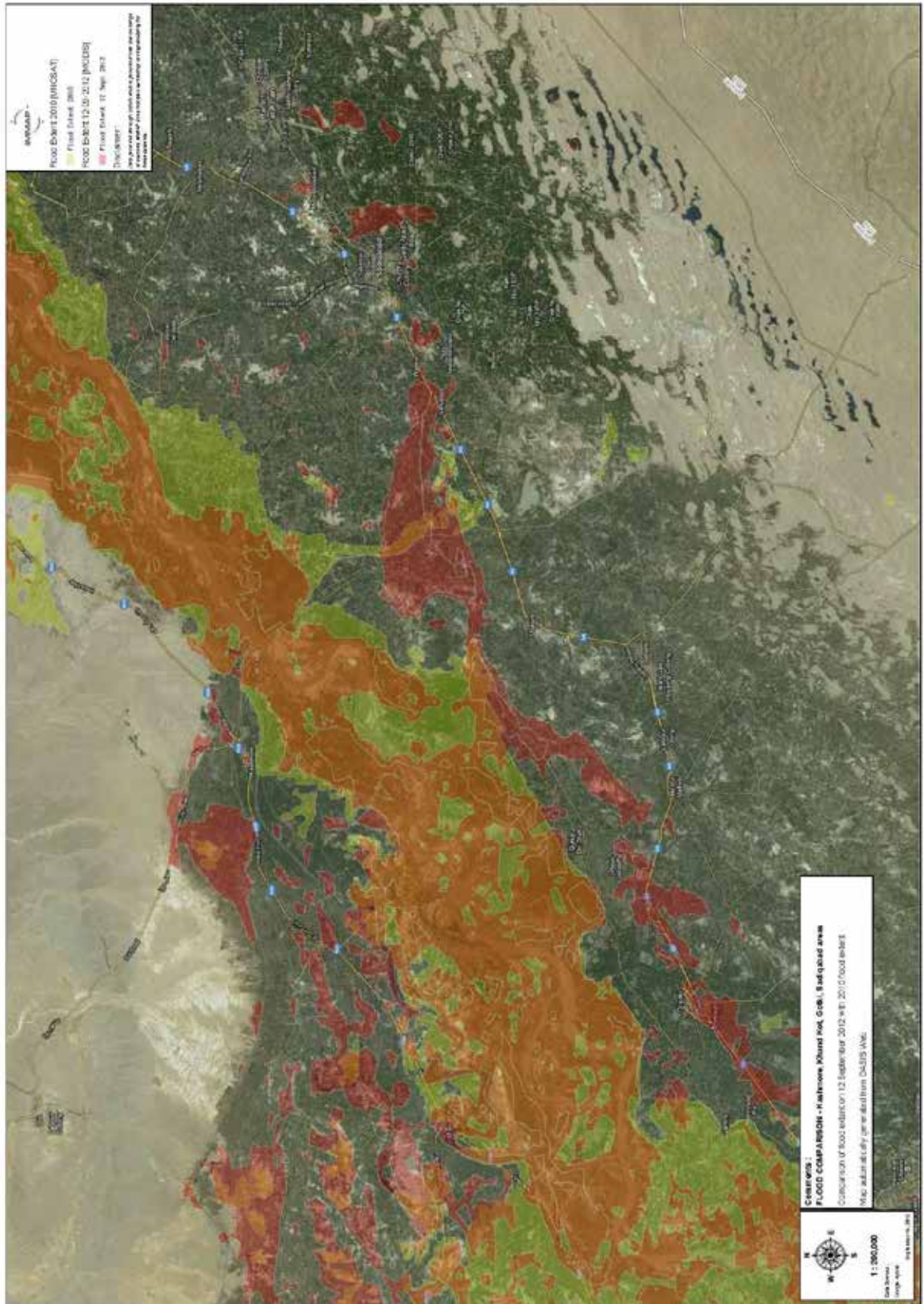
**The latest situational update for District Kashmore for the floods 2012 are given below**

2012 floods affected Kashmore to a larger extent. As many as 53 deaths and 1,862 injuries were reported. Population that were affected in 3,072 villages was estimated to be 851,830. Housing infrastructure was also severely affected as 66,596 houses were damaged and 50,014 houses were destroyed. 972 cattle head perished during the floods 2012<sup>42</sup>.

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<sup>42</sup> Losses and Damages update 23 January, 2013

9: Flood 2012 Extent Map for Kashmore District





### 2.1.3 Agriculture

It has been previously established that agriculture is the main source of livelihood/income for the people of district Kashmore. So any damage to this sector directly affects the population, particularly the poor ones, in this district. Rice crop had been the most severely hit by the floods 2010 along with minor damage to cotton. All the vegetables were damaged. In the floods 2010, crop area of 400,124 acres was affected. 87,857 households were in need of agriculture assistance. 63% of the people were provided with the agri-assistance and 37% were not covered in that assistance<sup>43</sup>.

In the floods 2011, out of a total crop area of 181,925 acres sown, 14,532 (12%) was affected. Cotton crop was sown on 30 acres; luckily there was no damage to this crop. Rice is a major crop of this area and it was sown on 181,619 acres of land, out of which 14,529(8%) of the crop was affected. 20% of the livestock was lost/sold due to these floods<sup>44</sup>.

### 2.1.4 Analysis of Food Security Situation

As mentioned in the previous section, district Kashmore is a food insecure district of Pakistan. Floods of 2010 and 2011 worsened the existing situation of the people. Thus the indicators of food security that is, availability, access, utilization and stability showed dismal situation in this district. Now, the floods of 2012 are further exacerbating the situation.

Previously, due to floods 2010, food availability became critical as 58 percent of the households completely lost their stock of wheat flour, 32 percent lost all pulses they had stored and cooking oil, ghee and butter was fully lost by 38 percent of the households. The immediate effects of the floods resulted in the loss of cereals as most of the households did not have food stocks and the ones who had stored some did not last more than one week. One reason for the lack of food stocks was due to the significant losses households had incurred due to the floods.

Due to the floods, many affected households had shifted their consumption of food to less preferred foods and borrowing was practiced by more than one third of households across the district. Skipping meals was widely practiced and the sale of farm animals was slightly high.

Floods, particularly of 2010, had grave impact on livelihoods, a majority of households lived below the poverty line, 52 % lived below the poverty line and 24 percent above the poverty line, rest are on the verge of poverty<sup>45</sup>. The low income levels further exacerbated by higher than normal food prices, left many households unable to purchase the amount of food they needed. The share of household expenditures on food increased from 61.8% to 65% for more than 50% of the population<sup>46</sup>.

Hence the short term effects of floods 2010 made the most of the population highly food insecure. But with the help of government and humanitarian partners' assistance, in the form of wheat seeds, pesticides, food grains etc, the economic activity revitalized in the district in the

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<sup>43</sup> Flood Impact Profile: Kashmore (2010), UNOCHA

<sup>44</sup> Sindh Flood Situation (2011), UNOCHA

<sup>45</sup> Multi Cluster Rapid Humanitarian Need Assessment (2010), UNOCHA

<sup>46</sup> *ibid*

last year. Also the extent of damage of floods 2011 was not much severe compared to the floods 2010. So the people started coming out of the poverty trap. But due to the floods of 2012 (up till 11-09-2012), the situation is again getting alarming since the livelihood of the district is affected. Once again, the food security situation in district Kashmore is worsening and the access and stability/sustainability of food is worrisome.

### 2.1.5 Health

According to WHO, 7 BHUs, 9 dispensaries and 1 rural health centre were affected during 2010 as compared to 6 BHUs that were reported damaged in 2011 floods<sup>47</sup>. According to the floods 2012 initial rapid assessment no damage was reported to any health facility. However, women, children and elderly people need immediate health support. The environment is ideal for mosquitoes and flies, which will aggravate the already troublesome situation of malaria in the area. Poor hygiene, sanitation and unsafe water are also contributing to the poor health status of rain hit communities. Mobile teams and camps can provide immediate relief. Pregnant and lactating women need special attention and nutrition.

#### WASH

During recent floods, water, sanitation and hygiene are one of the major needs in settlements and temporary Camps. Provision of safe drinking water through trucking, installation of hand pumps, provision of water storage containers, distribution of Aqua tabs, PUR Sachet, repair of existing facilities and installation of emergency latrines as well as bathing places, distribution of hygiene kits, soap and awareness is required. Beside drinking water people do not have facility of hand washing and bathing. Privacy for female is totally missing, people are forced to wash hands and bath with the stagnant rain water, which is a risk to the health of target community.

The proportion of people without sustainable access to safe drinking water and basic sanitation is high. Most of the community members don't have adequate clean and pure water to drink or sanitation facilities to use. All temporary schools or shelters don't have adequate child-friendly water and sanitation facilities and the people lack health and hygiene education. Women and girls pay the heaviest price for poor sanitation due to cultural and social behavioral norms.

The miseries of rain hit people only can be normalized by access to safe water, adequate sanitation, and provision of proper hygiene facilities<sup>48</sup>.

### 2.1.6 Education

Out of a total of 1,502 schools, 20 schools were damaged by floods 2010, 15 were damaged by torrential rains, 4 schools were used as IDP camps and 49 schools were reported damaged as a multiple of floods, rains and IDP camps<sup>49</sup>. Whereas in the same source total damaged schools are reported as 83. Schools damaged by levels are

<sup>47</sup> WHO, G. N. (8th to 12th September, 2011). Health Initial Rapid Assessment, 22 flood affected districts in Sindh. Islamabad

<sup>48</sup> Rapid Assessment of Kashmore District by Soofi Sachal Sarmast Welfare Association (SSSWA) 2012

<sup>49</sup> Flood Report 2010-11, RSU Sindh

- Primary: 56
- Middle: 6
- Secondary: 14
- Higher Secondary: 7

However UNOCHA reports in Kashmore profile as of December 2010 that according to education cluster 571 schools were partially damaged or destroyed. In response to such disaster, education cluster planned to establish 571 temporary learning centres (TLC) with educational kits. UNICEF planned to establish 575 temporary schools for northern Sindh. But due to non-availability of funds, as of December 2010, there was a gap of 541 TLCs with educational kits. During the same period, education cluster reached 10 percent of the school going children who dropped their schools due to flood related reasons. In 2011, no major damage to schools was reported

During 2012 floods, according to initial assessments, as of 17<sup>th</sup> September 2012, 283 schools were reportedly damaged and 188 schools were used as IDP camps<sup>50</sup>.

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<sup>50</sup> UNICEF

## 3 Sectoral DRR Mitigation Measures

### 3.1.1 Education

- The NGOs should work on awareness building programs for encouraging enrolment in schools, by incorporating teachers, students and youth in their community based programs. Increased enrolment would lead to enhanced literacy and literate people can easily be mobilized and made aware of the different disaster risks.
- NGOs working in the education sector should organize community-based programs that provide girls with opportunities to develop their skills (i.e., livelihood skills), providing information to parents about their children's learning or about the benefits of education.
- Affected or damaged schools should be repaired and reconstructed on priority basis with DRR principles in view.
- Government should introduce disaster risk reduction courses for teachers' training and should add DRR in the curriculum to support large-scale awareness.
- Local Philanthropists should be encouraged to take initiative to raise an emergency fund for immediate repair of infrastructure, support to affected poor students and parents after any disaster.
- Government should introduce a 'School Safety policy' taking all locally relevant hazards into account and adopting DRR measure for the existing schools and construction of new schools.
- From pre-school to secondary school, Integrate DRR trainings into the formal and non-formal education curricula.
- NGOs and other organizations working in the education sector should organize workshops to provide teachers with training on disaster preparedness and early warning signs.
- Education department should produce support materials linked with disaster risk reduction for teaching and learning.
- The Government and NGOs should invest in DRR sector and should incorporate DRR measures in improving school buildings as these can be used as shelter and evacuation centres 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.

### 3.1.2 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.
- 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.
- Organizations that are involved in construction of homes, health, education and other facilities should work with the government to establish and strictly enforce strict construction codes so that of future threats can be mitigated.
- DRR Planners, District and Provincial authorities should identify safe land and location for low income citizens who are living near the flood prone areas.
- Awareness regarding investment in the DRR sector should be initiated in order to avoid future threats.
- Brick lining projects should be initiated by the government for strengthening the canals.
- Radio can be a very important part of early warning system but care should be taken while transmitting early warnings. It should be in clear words and confirmed through reliable sources to avoid false reports and unnecessary panic.
- Media in district Kashmore should expand its role as a watchdog in monitoring and handling of donations in the post disaster phase so that the funds are given to the affected people of the district rather than self interest groups.

### 3.1.3 Health

- NGOs should encourage the community 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.
- Health department should take care of establishment of health facilities focused on certain population. Health officials should deal all the issues. 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.

#### 3.1.4 Livelihood

- 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.
- Flood control and salinity control projects can be conceived to make more land available for cultivation
- NGO's 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 watercourses for surface run off.

#### 3.1.5 Food

- 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.

#### 3.1.6 Wash

- 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.
- Taluka Municipal workers should monitor the quality of water and should distribute chlorine tablets for water purification in order to avoid diseases like cholera and hepatitis etc.
- 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.
- NGOs in district Kashmore should install raised hand pumps to maintain adequate access to water supplies in the event of a flood.

- Waste Water treatment projects should be initiated in district Kashmore to avoid deterioration of aquatic environment.

### 3.1.7 Government and Humanitarian Sector

- 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 the implementation of disaster risk reduction measures and effective emergency response through assignment of responsibility to each stakeholder. Stakeholders must have joint meetings to address the issues faced by them.
- District Disaster Management Authority should appeals for assistance through media at the national and international level.
- NGOs should follow the bottom up approach for the initiation of any CBDRM project. The bottom-up approach implies that whole process should start at the community level. Community members should invite to participate in every step of the planning process. It will give a sense of ownership to the community who in turn constructively contribute to achieve project objectives.
- District Disaster Management Authority and NGOs should employ the requisite staff who have a combination of practical experience and up to date theoretical knowledge related to Disaster Management and Sustainable development (Disaster Managers, Rescue and Relief providers etc.), should stockpile equipment (Boats, Jackets, medicine, food etc.) and should build institutional capacity at the district level.

## 4 Hazard Vulnerability and Capacity Analysis

### 4.1 Hazard Vulnerability and Capacity Analysis

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

#### 4.1.1 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”<sup>51</sup>

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.

*Table 4.1-1: Hazard matrix of KASHMORE District<sup>6</sup>*

Hazard	Frequency	Area affected /union councils	Severity /Force	Year <sup>52</sup>
Floods	Monsoon	Entire district	High	2003, 2005,2010
Heavy rains	Monsoon	Entire district	High	2010,2011,2012, 2013
Epidemics	Seasonal	Entire district	Low	Every year
Droughts	Rare	Entire district	Low	2002
Earthquake	Rare	Entire district	Low	2001, 2013
Transport accidents	Often	Entire district	Low	Every year

<sup>51</sup> The “Urban Governance and Community Resilience Guides” (ADPC, 2010)

<sup>52</sup> It is to be remembered that Kashmore District was created in 2004 and previously it was a part of Jacobabad therefore disasters before 2004 should be seen in terms of whole district Jacobabad inclusive of Kashmore.

### 4.1.2 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<sup>53</sup>”

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 Kashmore is prone to natural hazards; riverine floods and heavy rains, drought and earthquake <sup>54</sup> . River Indus flows in the east of the district and makes the district vulnerable to riverine floods. Kashmore has been hit by flood 2010 and torrential rains of 2011 and 2012.	According to 1998 census, total population of the district Kashmore was 663,322 <sup>55</sup> while projected population for year 2013 is 1,040,320. The district has an Average Annual Growth Rate (1981 - 98) 2.89% per annum, which means that the population will double itself in 37.43 years <sup>56</sup> from 1998. Such rapid growth in	Lack of knowledge, on the part of the general public and local officials about hazards - that may affect them, associated risks, damage, and precautions to be taken, is perhaps one of the most significant hindrance in the efforts to mitigate disastrous effects of most hazards.

<sup>53</sup> Participant's Course workbook (ADPC)

<sup>54</sup> Disaster Risk Management Plan (DRMP), Sindh, (2008), pp. 37

<sup>55</sup> Provincial Disaster Management Authority (PDMA), Sindh

<sup>56</sup> Rule of 70 <http://controlgrowth.org/double.htm>

Physical/material	Social/organizational	Attitudinal/motivational
	population gives birth to many socio-economic problems and makes the area vulnerable to different natural and made-made hazards	
There is no mainstreaming of disaster risk reduction (DRR) measures in the developmental activities or projects which not only make them unsustainable but also increase susceptibility of these projects against different hazards.	Like majority of the other districts in Sindh, district Kashmore is rural by its characteristics. 75 per cent of the population resides in rural areas as compared to the 25 per cent that resides in the urban areas. . Most people in the rural areas lack job opportunities or have unsustainable livelihoods (not insured) which escalate the risk against different hazards. [floods, rains etc.]	In rural areas of the district, women are marginalised in disaster risk reduction process because of social, economic, biological and physical differences. Disaster impacts women and men differently, even within the same household. Women have less social, economic and political power and are not represented in formal leadership structures.
Poor drainage system in the district, especially in the urban areas, gives birth to urban floods in monsoon seasons.	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 Kashmore district is 48.44 per cent of the total population and the working population is 51.56 per cent, which shows that dependency ratio <sup>57</sup> in the district is 94 per cent, which is very high and as such makes the population highly vulnerable.	Advocacy seminars and awareness campaigns regarding disaster risk reduction are insufficient.
There is a Lack of resources and funds for conducting disaster risk management activities. People need boats, life jackets and transport facilities for in time evacuation.	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.	Ethnocentrism (belief in the superiority of one's own culture) is at peak, in the rural areas of the district. Their minds are not ready to accept new positive changes. Most of the time they resist and avoid new patterns of life.
Floods and heavy rainfalls have damaged and weakened, the protection Bund (linear levees along rivers and ring levees around cities), in the east of the district Kashmore. There is weak/no proper monitoring system for the maintenance of these vulnerable points of the protection Bunds.	Community-based disaster drills are an important aspect of emergency management yet so very neglected by the district authorities. These drills provide a chance to practice the full spectrum of disaster response.	There is a lack of training, appropriate skills and awareness on disaster risk management, both at the community and the public servants' level. Skills to handle emergencies are very weak and need to be strengthened.
Early Warning systems, in Pakistan,	Disasters, poverty and vulnerability	Most people believe that disasters

<sup>57</sup> Dependency Ratio= (Population < 15 Years + Population > 65 Years)/ Population 15-65 Years



Physical/material	Social/organizational	Attitudinal/motivational
lack the basic equipment, skills and resources <sup>58</sup> . 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 measure water level and report them, timely.	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.	are an Act of Nature, which cannot be prevented.
There are settlements in the district, which are situated in the low lying risk areas called <i>Katcha</i> . These areas are exposed to regular occurring of floods.	Immediate response by the Government agencies, in terms of relief activities, in emergencies has always been elusive. It always responds in the end and mostly when the situations has somewhat improved.	
Climate change is said to be responsible for these (2011, 2012,2013 ) heavy rains because usually Sindh province receives very little rains (on average 5 inches <sup>59</sup> during monsoon). Environmental scientists agree that they cannot explain the floods in Sindh as the area that received the rain is normally very dry.	Lack of coordination amongst all the stakeholders is a major hindrance in implementation and progress of the Disaster Risk Reduction process.	

<sup>58</sup> Government of Pakistan (2006), "National Plan: Strengthening National Capacities for Multi-hazard Early Warning & Response System (Phase-I)", Cabinet Division, pp.8

<sup>59</sup> Disaster Risk Management Plan, Sindh province,(2008), PP. 34

### 4.1.3 Capacity

Capacity is contrasted to vulnerability. Ability to perform or produce is termed as 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<sup>60</sup>.

#### 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
District Kashmore has an important Economic Geography (importance of location in certain economic activity) in the country. The district borders Baluchistan on one side and Punjab on the other and acts as a gateway. Thus providing business opportunity to local traders which enhance capacity against their vulnerabilities.	The overall literacy rate for 2012-13 (for the population of 10 years and above) is 39%; for males it is 58 and for females it is 18%. For the urban rural comparison, urban literacy rate is higher than the rural. Literate people can easily be mobilized and made aware of the different disaster risks.	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 etc.).
Kashmore has an efficient canal irrigation system which helps in agriculture productivity. Guddu Barrage is located in the district. Canals taken out of the <b>Guddu Barrage</b> irrigate the fertile land of	District Disaster Management Authority (DDMA) of Kashmore has been established in the DCO's office on a temporary basis. DDMA formulates disaster plan for the district and assigns roles and	Indigenous knowledge of the local communities is a great asset not only for the vulnerable communities but also for the humanitarian organizations. Humanitarian Organizations do

<sup>60</sup> Participant's Course workbook (ADPC)

Physical/material	Social/organizational	Attitudinal/motivational
the district. Out of 136 rural <i>mouzas</i> , 120 (88%) are irrigated with the help of canals.	responsibilities to the local district departments. DDMA carries out emergency response and relief activities in the affected areas.	consider suggestions from local communities and incorporate those in their policies.
The total health facilities in district are 45. There are two <i>taluka</i> hospitals, 4 Rural health centres (RHCs), 25 Basic Health Units (BHUs), 2 MCH, 17 General Dispensaries (GD) and 1 Sub health centres. 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.	Rural areas of the district have traditional system. They have Biradari system which is composed of many local influentials. They decide the local disputes and try to bring harmony in the area.	Primary teachers in rural communities really support the welfare activities. They not only motivate the local community for project support but also encourage their students to join the cause.
The total number of schools in the district Kashmore is 1,502. Out of which 1423 are primary schools, 47 are middle, 23 are secondary, and 9 are higher secondary schools <sup>61</sup> . These school buildings are also used as shelter and evacuation centres in emergency.	Union council sectaries are very helpful in risk assessment process. Because they keep all records of the union council and even provide maps of the relevant union council.	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 ( <i>Ulemas</i> ) also contribute their part by counselling flood-affected people.
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 135 kilometres in this district <sup>62</sup> . These roads can be used as evacuation point in flood disaster. Good roads are also helpful in carrying out relief activities.	After the 2010 floods, Sindh Provincial Government has set up Citizens Damage Compensation Program (CDCP) to support and provide financial relief to the affected households of the Province. Total cards processed <sup>63</sup> in (second phase) Sindh are 372,628 among which 20,527 cards are processed in district Kashmore.	
District Kashmore has number of small manufacturing units. These industries include rice and flour mills, Gaddu Thermal and Kandkot gas field. These industries are the source of employment and are also useful in the economic uplift of the people.		

<sup>61</sup> Flood Report on Educational Sector Of Sindh Province, (2010-11), SINDH Education Management Information System (SEMIS), Department of Education And Literacy, Government of Sindh , pp.39

<sup>62</sup> Sindh Development Statistics, (2008), Lahore University of Management Sciences (LUMS), pp. 262

<sup>63</sup> National Database & Registration Authority (NADRA), Citizen Damage Compensation Report (CDCP), distributed on 17-5-2013

## 5 Coordination and Support Services

### 5.1 Important Contacts

#### *Departmental Focal Points*

S#	Department	Office In charge	Designation	Telephone Numbers	
				Office	Mobile
1	Administration	Mr.Hafiz Ahmad Sail	DC	0722-570901	
		Mr.Imtiaz Ahmad Magni	AC	0722-576474	
		Mr.Zulfiqar Ali Daud	AC	0722-570017	
		Mr.Allah Dino	AC	071-5001591	0300-3140043
		Mr.Abdul Hameed Kato	Mukhtiarkar	0722-576473	0345-3979358
		Mr.Bashir Ahmad Kanrani	Mukhtiarkar	0722-571918	0333-7303151
		Mr.Aman Ullah nedwani	Mukhtiarkar		0336-5813614
2	Education	Mr.Syed Ibrahim Shah	District Education Officer	0722-570908	0333-7301899
3	Health	Mr Aman Ullah Koosa	District Health Officer	0722-570931	
4	Agriculture	Mr.Rahmatullah Malik	Deputy Director		0334-2140976
5	Forest	Mr.Ziadullah Leyari	Forest Officer		0333-7131220
6	Livestock	Dr. Abdul Fatah Bhutto	District Officer		0302-3618347
7	Speco	Mr.Irshad Ali Kanrani	X.E.N		0300-3414262
8	Social Welfare	Mr.Ghazi Khan Suhriyani	District Officer		0333-7312883
9	Irrigation	Mr.Sultan Ahmed Mahar	X.E.N		0300-9314687
10	Food	Mr.Fazaldin Bangwar	DFC		0300-3618991

#### *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	GPO	0722-576526
9	Railway inquiry	117
10	Guddu Barrage Control room	0722-578683

*List of Taluka Nazims with Address*

Taluka	Name	Address
Kashmore	Abdul rauf	Own Village Taluka Kashmore
Kandhkot	Ghulam Rasheed Khan	Village Dari Taluka Kandhkot
Tangwani	Mir Ashraf Ali Khan Bijrani	Village Bijar Khan Bijrani

Source: Election Commission of Pakistan

*Police Stations*

Taluka	Rank and Name	Office / Mobile Number
Kashmore	SSP Omar salamat	0722-570905
Kashmore	DSP Muhammad Jatal Mehr	0722-570306
Kandhkot	DSP Abdul Haq Qureshi	0722-571051
Kandhkot	SHO Gul Muhammad Marr	0346-8232012
Tangwani	DSP Muhammad Sadique Wado	0300-3418277

*List of NGOs Working in Kashmore*

Name	Contact
Health and Nutrition Development Society	0722-570360/021-34532804/0346-8209557
Kainaat Development Association	0722-572186
Laar Humanitarian and Development Program	0346-3752227
MUSLIM AID	051-2102249, 2102252
People In Need	051-2291560
Save The Nature and Humanity	07225-70635/0332-3863502
Sewa Development Trust Sindh	0300-3123739/0243-554082
Sindh Rural Support Organization	0722-570351
Tameer Development Organization	0722-578678
International Organization for Migration	051-2831061-65
Soofi Sachal Sarmast Welfare Association	0722-570154
Pakistan Fisherfolk Forum	0213-5092862/0213-4534463/0300-3102139
Citizen Commission for Human Development	072-2574131/ 0333-7305856
Village Development Association	0302-7362435
Karam Rasool Welfare Society	0315-2020282

Source: www.himpakistan.pk



## 5.2 Health Facilities

### Public Hospitals in District Kashmore

Hospitals	Name of In charge M.S	Contact Number
Taluka Hospital, Kashmore	Dr.Liaquat Kalwarni	0333-73606963
Taluka Hospital, Khadhkot	Dr.Heerdin Koharini	0333-7302251

### List of health facilities

Taluka	Union Council	Health Facility Name
Kashmore	Kashmore	TALUKA HOSPITAL, KASHMORE
Kashmore	BAKHAH PUR	RHC BAKHAH PUR
Kashmore	Zorgar	BHU ZORGARAH
Kashmore	Zorgar	BHU KUMB
Kashmore	K.s.ali Bilawal Khan Domki	BHU MOTAN MEHAR
Kashmore	Gublo	BHU GUBLOO
Kashmore	Buxapur	BHU BUXAPUR
Kashmore	Buxapur	BHU SAEED KHAN RIND
Kashmore	Badani	BHU BADANI
Kashmore	Sodhi	BHU GHULAM MUHAMMAD JAKHRANI
Kashmore	Gulanpur	BHU GULAN PUR
Kashmore	Gihapur	BHU MUHAMMAD KHAN MAZARI
Kashmore	Kashmore Colony-i	BHU PUNHOO BHATTI
Kashmore	Zorgar	DISP GHOUH BUX BHANGWAR
Kashmore	Gulanpur	DISP SARDAROO KHOSO
Kashmore	Kashmore Colony-i	DISP KHAWALI, KASHMORE
Kashmore	Mohammad Azim Gro	DISP Mohammad Azim Gro
Kashmore	Khani Badani	DISP Khani Badani
Kashmore	Meurab Khan Mazari	DISP Meurab Khan Mazari
Kashmore	Mando Khan	DISP Mando Khan
Kashmore	KASHMORE COLONY-I	MCHC KASHMORE
Kandhkot	MALEER	TALUKA HOSPITAL, KANDHKOT
Kandhkot	GHOUS PUR	RHC GHOUS PUR
Kandhkot	DARI	BHU DARI
Kandhkot	KAJILI	BHU MIR GUL M. KHAN JAKHRANI
Kandhkot	AKHERO	BHU BAHARABAD
Kandhkot	KAJILI	BHU MUHAMMAD KHAN KHOSO
Kandhkot	HAIBAT	BHU ALI MUHAMMAD KHOSO
Kandhkot	SARDARABAD	BHU SARDARABAD
Kandhkot	MALEER	MCH CENTER KAND KOT
Tangwani	KARAM PUR	RHC KARAM PUR
Tangwani	TANGWANI	RHC TANGWANI
Tangwani	Cheel	BHU MUHAMMAD YAQOOB BHELKANI
Tangwani	Gulwali	BHU RASOOL ABAD
Tangwani	Tangwani	BHU MEHRAB KHAN MAZARI
Tangwani	Duniapur	BHU SHER MUHAMMAD BIJARI
Tangwani	Gulwali	BHU PIR JAN BAJKANI

Taluka	Union Council	Health Facility Name
Tangwani	Tangwani	BHU BIJAR KHAN BIJARANI
Tangwani	Cheel	BHU ILLAHI BUX KHOSO
Tangwani	Risaldar	BHU RASALDAR
Tangwani	Jamal	DISP NASRULLAH BIJARANI
Tangwani	Jamal	DISP ADAM KHAN
Tangwani	Jamal	DISP ADAM KHAN
Tangwani	Cheel	DISP IMAM BUX KEHAR
Tangwani	Tangwani	DISP HAZOOR BUX NIDWANI