PAKISTAN
EMERGENCY SITUATIONAL ANALYSIS

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November 2011

Credits

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Introduction

Pakistan Emergency Situational Analysis (PESA) as obvious from its name, this report covers emergencies/disasters situation in Pakistan, their analysis and overview. The numbers and figures used in this report are taken from different assessments, censuses and analyses. The purpose of this exercise is to gather facts and figures from various sources in one single report that could help public understand the current situation of emergencies in Pakistan. The reader of this report could be anyone right from the top level management to a lay man. Everyone can benefit from this report. In PESA all analysis data combined to provide solid analytic, referral and updated information about emergency situation analysis in Pakistan for Humanitarians group as well as for public sectors.

1. General Information and Methodology

1.1. Background Information

Pakistan braved some of the worst ever natural disasters during the last decade in the shape of deadliest earth quake of October 2005 and heavy flooding of August 2010, wreaking havoc not only with human lives but also inflicting colossal loss on its infrastructure. Just after one year the devastating floods of 2010, again the month of August 2011 brought havoc to the Pakistan; and people of Sindh, Baluchistan and partially Punjab, confronted another natural disaster in the form of floods of 2011 due to heavy Monsoon rains. So far, over 8 million people have been affected; more than 1.5 million homes are partially damaged or destroyed and approximately 2.7 million hectares (**6.6717m acres**) of land have been affected in total out of which 2.285 m acres of crop area damaged that contained major crops i.e. cotton, sugarcane tomatoes, and other vegetables mostly in the southern provinces of Sindh and Baluchistan. Heavy rains have persisted well into mid-September and have displaced around 666,000 people, who have sought shelter in more than 2,900 temporary relief sites[1].

Flood 2011 strikes affected areas at the time when people were in the process of rehabilitation and reconstruction was under process. The 2010 floods affected an estimated 20 million people and 1.7 million homes. Flood 2010 was more extreme for Baluchistan and KPK as more people have lost their lives and livelihoods. But recent floods seem to be more dangerous for Sindh as these floods were due to heavy Monsoon rains and inadequate drainage system in Left Bank Outfall Drain (LBOD). These floods, unlike other riverine floods due to increased water levels in rivers, didn't bring any silt that could be helpful for the soil and on the other hand many of the areas are still under stagnant water, which will result in water logging and increased salinity. This would result in barren and uncultivable lands for over a period of not less than five years and shows the long-term devastating effects for Sindh Province. This report currently focuses on Sindh Province and all data and analyses are relevant to Sindh only.

NDMA Losses and Damages Data state that 6,893,575 acres of land were affected in total and 2,210,812 of crop area damaged[2]. The majority of people have lost their crops, particularly farmers and peasants. According to a multi-sector needs assessment, approximately 80% of the people in the affected areas rely on agriculture as a source of food and income. The floods have compounded effects on the lives of people as it destroyed their current and future sources of livelihoods. Although much of the stagnant water has receded, but as of November 2011, 44% of villages/localities were still inundated and water is severely affecting the yield of the *Rabi* crops.

In addition to above all, more than 116,205 livestock perished the almost 79,000 dead. Around 5 million surviving animals have been directly affected3. Surviving livestock is without shelter, exposed to a heightened risk of disease and worm infestation from stagnant water, and without feed as a result of flooded pastures and destroyed feed stocks.

1.2. Objectives

The main objective of this report is to provide data from a variety of assessments ad reporting sources into one single document that would better describe the characteristics of the flood affected districts. Since a

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[1] 2011 floods effects at household level of some of the affected districts in Sindh and Baluchistan province, Pakistan**.** A working Document for FAO.

[2] http://ndma.gov.pk/Documents/monsoon/Sindh/Losses_Damages_23Nov2011.pdf

[3] NDMA losses and damages report and Multi-Sector Needs Assessment 2011

number of assessments have already been conducted and reports issued either by government and/or different sectors i.e. Health Education, Food and Agriculture, Livestock and others, this report compiles scattered numbers and figures of notified districts of Sindh into one single report. At the same time, the assessments provide information on the effects and damages caused by the floods at household level as well as their priority needs in the food security (agriculture and livestock) sector.

This report will facilitate a variety of readers. On the other hand, it will also help in the near future to identify the priority areas of intervention and develop location specific responses.

1.3.   Sources of Information

The main sources of information are data obtained from the following assessments and census conducted at different points of time and weekly bulletins prepared for the flood affected and notified districts of Sindh:

- ➢ Multi Sartorial Needs Assessment (OCHA lead)
- ➢ NDMA Losses and Damages Data.
- ➢ Maps Produced Using Imagery
- ➢ 1998 Population Census
- ➢ Weekly Health Bulletin 64 issue by WHO, Pakistan
- ➢ Weekly SUPARCO Bulletin
- ➢ Summary (CPI+WPI), Federal Bureau of Statistics, GOP

The methodology used in preparing these tables is to take information from the above cited sources and using projection and estimations for human and livestock population on the basis of Population and Livestock Censuses the tables are generated in their current form.

1.4.   Scope and Shortcomings

It should be remembered that while dealing with the human population, estimates were taken into account. Especially the population estimate of TM Khan may be underreported by the Benazir Income Support Programme and some NDMA data are most likely upward biased in case of damaged crops, data may also be biased due to expectations that compensation packages were promised to households and less affected communities feared to be less likely to receive assistance if their damage was not massive. This information depicts the flash picture of flood affected notified districts of Sindh as of November 2011. The situation will be different at the time of publication of the report as the flood water is keep on receding in flood affected areas and some communities may be less affected than other

Quick Summary

The 2011 floods have affected around 9 million people, out of which 4.8 million were females and 4.2 million were male. The total number of affected households was 1,468,928 while the number of vulnerable households was 621, 838. An estimated 666,000 people have been displaced by floods. Flood engulfed 6.9 million acres of land damaging about 2.2 million acres of crop fields. An estimated, 1,116,205 cattle have perished.

Most Immediate Relief Needs; % of HHs

Overall

Need	%
Food	70%
Cash	57%
Shelter	42%
Medical health support	39%
Clothing/blankets/NFIs	36%
Drinking water	17%
Animal support	13%
Sanitation	10%
Other	7%
Temporary learning facilities	5%
None	3%
Don't know	1%

Male

Need	%
Food	85%
Cash	75%
Shelter	53%
Medical health support	27%
Clothing/blankets/NFIs	22%
Drinking water	14%
Animal support	10%
Sanitation	6%
Other	5%
Temporary learning facilities	2%
None	1%
Don't know	1%

Female

Need	%
Food	56%
Medical health support	51%
Clothing/blankets/NFIs	49%
Cash	39%
Shelter	30%
Drinking water	21%
Animal support	16%
Sanitation	15%
Other	9%
Temporary learning facilities	7%
None	4%
Don't know	2%

Source: Multi-Sector Needs Assessment Final

Most Immediate Early Recovery Needs; % of HHs

Overall

Need	%
Housing	73%
Health facilities	38%
Animal support	29%
Agri. inputs (Seed, Fertilizer)	27%
School	27%
Credit	21%
Road infrastructure	15%
Agri. equipment or repair	14%
Other	12%
Animal restocking	10%
Irrigation repair	7%
Land reclamation	5%
None	5%
Fishing	5%
Grain storage	3%
Don't know	3%
Embankments	3%
Agricultural extension	1%
Assistance with land use rights	1%

Male

Need	%
Housing	78%
Agri. inputs (Seed, Fertilizer)	42%
Animal support	29%
Health facilities	27%
School	22%
Agri. equipment or repair	20%
Road infrastructure	19%
Credit	18%
Irrigation repair	8%
Animal restocking	8%
Other	7%
Fishing	6%
Land reclamation	5%
None	3%
Embankments	2%
Grain storage	2%
Don't know	2%
Agricultural extension	1%
Assistance with land use rights	1%

Female

Need	%
Housing	69%
Health facilities	50%
School	32%
Animal support	29%
Credit	23%
Other	18%
Agri. inputs (Seed, Fertilizer)	12%
Road infrastructure	12%
Animal restocking	12%
Agri. equipment or repair	7%
None	7%
Land reclamation	6%
Irrigation repair	5%
Don't know	5%
Grain storage	5%
Embankments	4%
Fishing	4%
Agricultural extension	1%
Assistance with land use rights	1%

Source: Multi-Sector Needs Assessment Final

Map for Flood Affected Notified Districts

FlOOD 2011 AFFECTED POPULATION - SINDH NOTIFIED DISTRICTS
November, 2011

MEN AFFECTED

88582
158013
308890
426858
432000
569219
43950
47957
277103
164814
350540
103673
346258
438099
362871
84683

WOMEN AFFECTED

83485
166987
362609
501095
468000
668213
53400
61672
292726
77178
213178
354611
239153
583202
544308
93075

TOTAL AFFECTED

Ghotki
172067

325000
Dadu

671499
Naushahro
Feroze

Khairpur
927953

Shaheed
Benazirabad
900000

1237432
Sanghar

109629

97350
Jamshoro

Matiari

Umerkot
180851

377992
569829

Hyderabad
705151

Mirpur
Khas

585411

Tando
Muhammad
Khan

Badin
1021301

Tharparkar
907179

Thatta
177758

% Affected Population

120%
100%
80%
60%
40%
20%
0%

Badin | Dadu | Ghotki | Hyderabad | Jamshoro | Khairpur | Matiari | Mirpurkhas | Nausharo Feroz | Sanghar | Shaheed... | Tando Allahyar | T.M. Khan | Tharparkar | Thatta | Umerkot

Men and Women Affected

800,000
700,000
600,000
500,000
400,000
300,000
200,000
100,000

Badin | Dadu | Ghotki | Hyderabad | Jamshoro | Khairpur | Matiari | Mirpurkhas | Nausharo Feroz | Sanghar | Shaheed... | Tando Allahyar | T.M. Khan | Tharparkar | Thatta | Umerkot

■ Men Affected   ■ Women Affected

Legend

FLOOD AFFECTED

	0 - 50000
	50000 - 100000
	100000 - 200000
	200000 - 300000
	300000 - 400000
	400000 - 500000
	500000 - 750000
	750000 - 1000000
	1000000 - 1500000
	1500000 - 2000000

iMMAP

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FROM THE AMERICAN PEOPLE

Information Management Unit
iMMAP Pakistan

Map Doc Name:
iMMAP_PAK_Population_Affected_Sindh_MapA3L_v1_01

Creation Date: Nov 26, 2011
Projection/Datum: WGS84
Web Resources: http://www.iimap.org
Nominal Scale at A3: 1.32,136,714

0   25   50   100 Kilometers

Map data source(s):
PCO, BISP,NDMA

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

Total Affected Population	**8,966,402**
Women Affected	**4,762,892**
Men Affected	**4,203,510**
Estimated Total number people displaced	**666,000**
Total Affected Households	**1,468,928**
Total Vulnerable Households	**621,838**
Area Damaged (Acres)	**6,893,575**
Crop Area Damaged (Acres)	**2,210,812**
Cattle Head Perished	**116,205**

Map Locator

2.2: Demography

2.2.1: Population Highlights

- Average HH size is 5.74 for notified districts and average annual growth rate is 2.29%
- More than 84% of the UC affected
- More than 33,000Village/localities affected
- As of 30th November 2011, among them 46% still have standing water and 18% of them were flooded last year also.
- Population affected in notified districts is 42%Out of these 47% are men and 53% are women

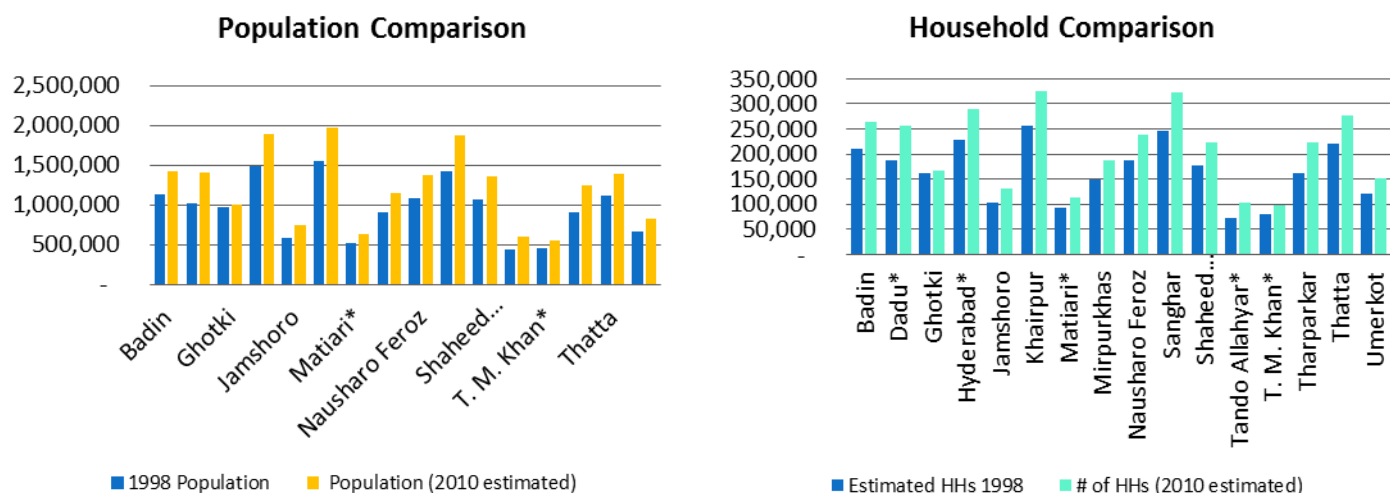	Table 1: Demographics of Notified Flood Affected Districts of Sind								
District	1998 Population	Estimated HHs 1998	Annual Growth Rate (%)	Average Household Size	Population (2010 estimated)	# of HHs (2010 estimated)	# of UCs	# of Affected Ucs	% of UC affected
Badin	1,136,044	211,179	2.26%	5.38	1,421,559	264,253	46	46	100%
Dadu*	1,018,651	187,544	2.65%	5.43	1,399,997	257,754	52	52	100%
Ghotki	970,549	161,758	2.80%	6.00	997,724	166,287	40	40	100%
Hyderabad*	1,482,051	227,476	2.02%	6.52	1,888,570	289,872	52	24	46%
Jamshoro	582,094	103,104	2.06%	5.65	745,082	131,973	28	25	89%
Khairpur	1,546,587	255,261	2.71%	6.06	1,979,631	326,734	76	76	100%
Matiari*	515,331	92,676	1.61%	5.56	625,161	112,428	19	19	100%
Mirpurkhas	905,935	148,514	2.37%	6.10	1,149,348	188,418	41	41	100%
Nausharo Feroz	1,087,571	187,989	1.61%	5.79	1,375,777	237,806	51	51	100%
Sanghar	1,421,977	245,168	2.77%	5.80	1,876,959	323,614	69	55	80%
Shaheed Benazirabad	1,071,533	177,522	1.63%	6.04	1,355,489	224,565	51	51	100%
Tando Allahyar*	429,793	73,811	2.76%	5.82	598,650	102,810	19	19	100%
T. M Khan*	447,218	79,860	1.66%	5.60	545,647	97,417	16	16	100%
Tharparkar	914,291	163,266	3.13%	5.60	1,250,478	223,300	44	44	100%
Thatta	1,113,190	219,998	2.26%	5.06	1,397,058	276,098	55	11	20%
Umerkot	663,095	122,335	3.28%	5.42	828,868	152,919	27	27	100%
Total	15,305,911	3,024,820	2.29%	5.74	19,435,999	3,376,248	686	597	84.35%

Source: PCO, Benazir Income Support Programme and NDMA Losses and Damages Data

2.2.2: Population and Households Comparison for 1998 and 2010 Estimates

Population Comparison

Legend: 1998 Population, Population (2010 estimated)

Household Comparison

Legend: Estimated HHs 1998, # of HHs (2010 estimated)

Population of the Districts with"*" are estimates projected backward using population growth formula $P_t=P_o e^{rt}$. This is due to the reason that these districts are split into multiple districts; Hyderabad is split into Hyderabad, Matiari, Tando Allah Yar and Tando Muhammad Khan.

2.2.3: Population Affected

% of Population affected

Men and Women Affected
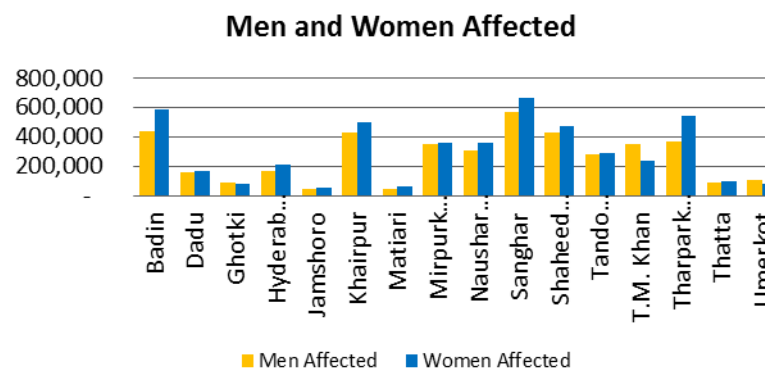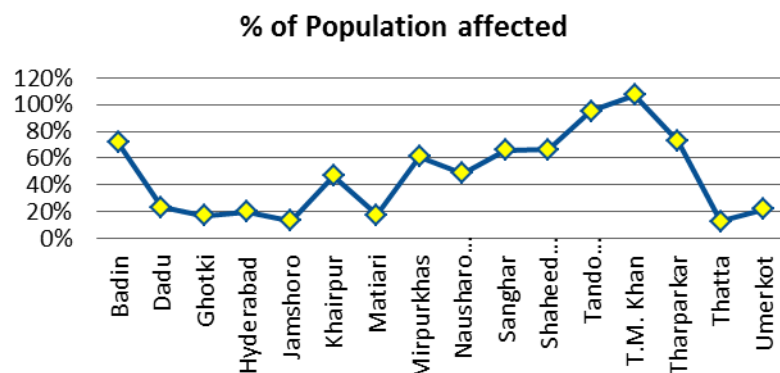
2.3: Damages Details for Notified Flood Affected Districts of Sindh

District	Population (2010 estimated)	Affected Population	% of Population affected	Men Affected	Women Affected	Total # of R. Villages	Villages/ Locality Affected	% of Villages still flooded	% of villages flooded last year	Total village still flooded	Village flooded last year
Badin	1,421,559	1,021,301	72%	438,099	583,202	510	6,395	58%	9%	3,709	576
Dadu	1,399,997	325,000	23%	158,013	166,987	390	1,454	42%	22%	611	320
Ghotki	997,724	172,067	17%	88,582	83,485	284	1,361	42%	22%	572	299
Hyderabad	1,888,570	377,992	20%	164,814	213,178	208	681	42%	22%	286	150
Jamshoro	745,082	97,350	13%	43,950	53,400	193	614	34%	42%	209	258
Khairpur	1,979,631	927,953	47%	426,858	501,095	440	2,640	13%	38%	343	1,003
Matiari	625,161	109,629	18%	47,957	61,672	123	415	34%	42%	141	174
Mirpurkhas	1,149,348	705,151	61%	350,540	354,611	451	3,178	48%	8%	1,525	254
Nausharo Feroz	1,375,777	671,499	49%	308,890	362,609	231	437	42%	22%	184	96
Sanghar	1,876,959	1,237,432	66%	569,219	668,213	412	5,182	48%	8%	2,487	415
Shaheed Benazirabad	1,355,489	900,000	66%	432,000	468,000	547	4,104	34%	42%	1,395	1,724
Tando Allahyar	598,650	569,829	95%	277,103	292,726	96	1,609	58%	9%	933	145
T.M. Khan*	545,647	585,411	107%	346,258	239,153	163	2,835	58%	9%	1,644	255
Tharparkar	1,250,478	907,179	73%	362,871	544,308	166	2,284	48%	8%	1,096	183
Thatta	1,397,058	177,758	13%	84,683	93,075	619	629	58%	9%	365	57
Umerkot	828,868	180,851	22%	103,673	77,178	238	1,691	48%	8%	812	135
Total	19,435,999	8,966,402	46%	4,203,510	4,762,892	5,071	35,509	46%	17%	16,313	6,043

Source: BISP, NDMA Losses and Damages and Multi-Sector Needs Assessment Final

* T.M. Khan affected population is 107% due to the difference between estimates taken from BISP and NDMA losses and damages data.

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2.3.1: UC and Villages Affected
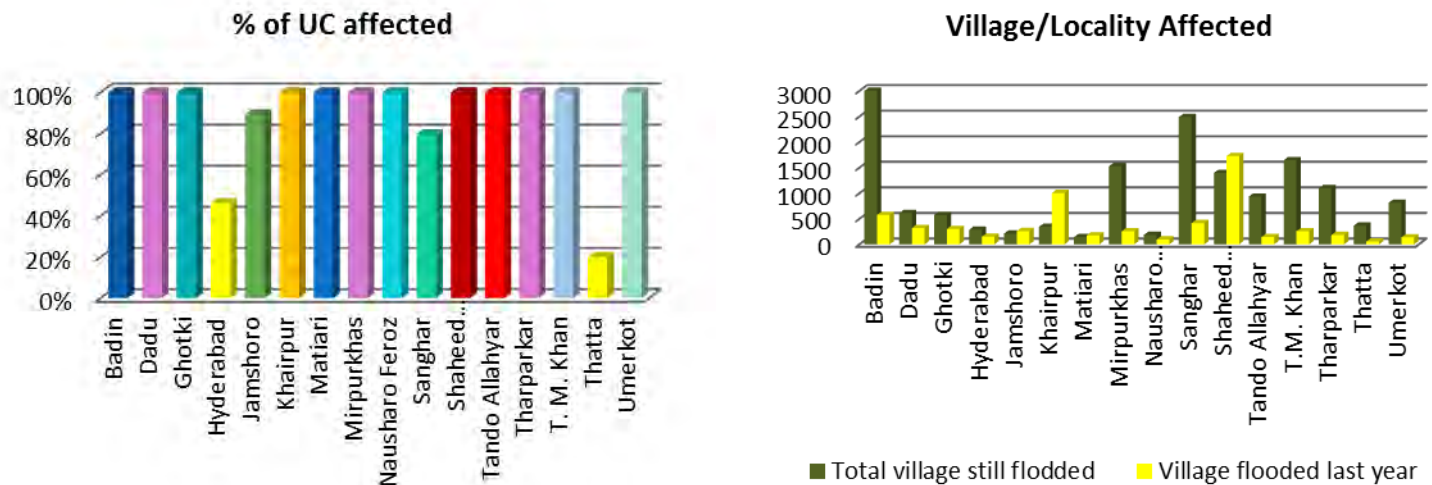
2.4: Details for the affected houses and vulnerable households

District	# of HHs (2010 estimated)	Total Vulnerable HHs	% of vulnerable Households	Total Affected houses	Partially Damaged	Fully Destroyed	Partial %	Fully %
Badin	264,253	116,271	44%	382,562	172,155	210,407	45%	55%
Dadu	257,754	79,904	31%	17,562	12,610	4,952	72%	28%
Ghotki	166,287	48,223	29%	31,630	23,891	7,739	76%	24%
Hyderabad	289,872	92,759	32%	20,624	13,219	7,405	64%	36%
Jamshoro	131,973	68,626	52%	43,950	32,962	10,988	75%	25%
Khairpur	326,734	120,892	37%	11,429	7,138	4,291	62%	38%
Matiari	112,428	58,463	52%	32,803	23,801	9,002	73%	27%
Mirpurkhas	188,418	71,599	38%	118,110	30,627	87,483	26%	74%
Nausharo Feroz	237,806	76,098	32%	31,455	21,300	10,155	68%	32%
Sanghar	323,614	122,973	38%	213,928	88,722	125,206	41%	59%
Shaheed Benazirabad	224,565	116,774	52%	200,000	128,000	72,000	64%	36%
Tando Allahyar	102,810	45,236	44%	70,163	64,132	6,031	91%	9%
T.M. Khan	97,417	42,863	44%	72,935	47,582	25,353	65%	35%
Tharparkar	223,300	84,854	38%	178,356	96,896	81,460	54%	46%
Thatta	276,098	121,483	44%	11,257	11,257	-	100%	0%
Umerkot	152,919	58,109	38%	32,164	23,198	8,966	72%	28%
Total	**3,333,734**	**1,325,127**	**40%**	**1,468,928**	**797,490**	**671,438**	**54%**	**46%**

Source: BISP, NDMA Losses and Damages and Multi-Sector Needs Assessment Final

Note: Vulnerable Households are headed by Children, Elderly, Women and Disabled People

Rainfall data
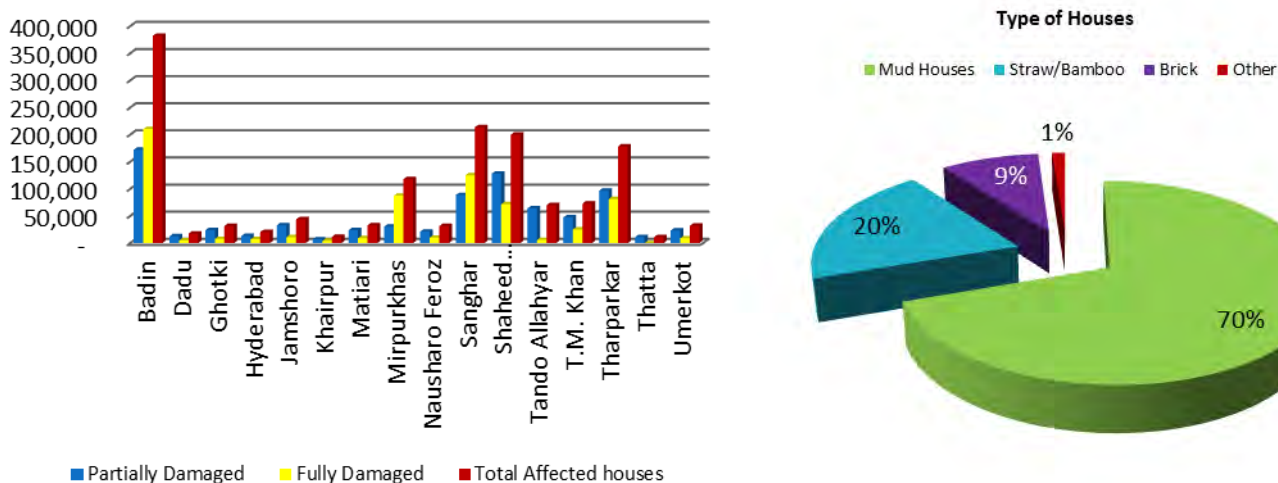
Table 4: Rainfall data						
Districts	22 Sep	1 Oct	8 Oct	18 Oct	30 Oct	Average Rainfall
Badin	358.1	347.8	276.6	193.1	159.2	266.96
Dadu	78.3	62.9	42.2	22.1	16.7	44.44
Hyderabad	3.9	3.6	3.4	2.2	2.0	3.02
Jacobabad	72.4	68.9	23.6	11.4	9.5	37.16
Jamshoro	43.4	31.1	18.1	11.6	10.0	22.84
Khairpur	3.2	3.1	2.9	1.7	1.4	2.46
Matiari	17.5	17.0	11.6	7.5	5.7	11.86
Mirpurkhas	179.6	177.5	131.4	86.7	67.0	128.44
Nousheroferoz	15.1	14.7	11.3	5.0	3.7	9.96
Sanghar	247.0	236.9	216.4	154.3	125.4	196
Shaheed Benazirabad	63.6	60.3	42.7	25.6	16.3	41.7
T. M. Khan	29.4	28.6	19.2	9.6	8.1	18.98
Tando Allahyar	32.3	31.3	29.0	22.3	20.1	27
Tharparkar	20.7	21.2	19.8	15.7	12.0	17.88
Thatta	64.5	63.0	39.3	21.4	13.6	40.36
Umerkot	75.9	78.9	70.9	56.6	49.1	66.28
Total	1304.9	1246.9	958.3	646.8	520.1	935.4

Source: PAK-SCMS bulletin Vol. 11

Average Rainfall and Rainfall Trend
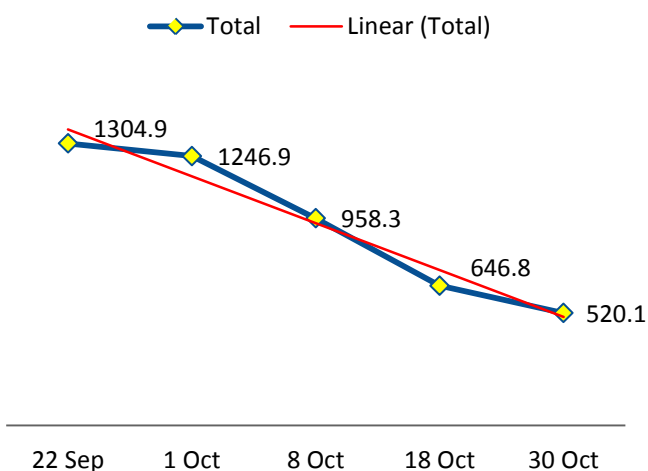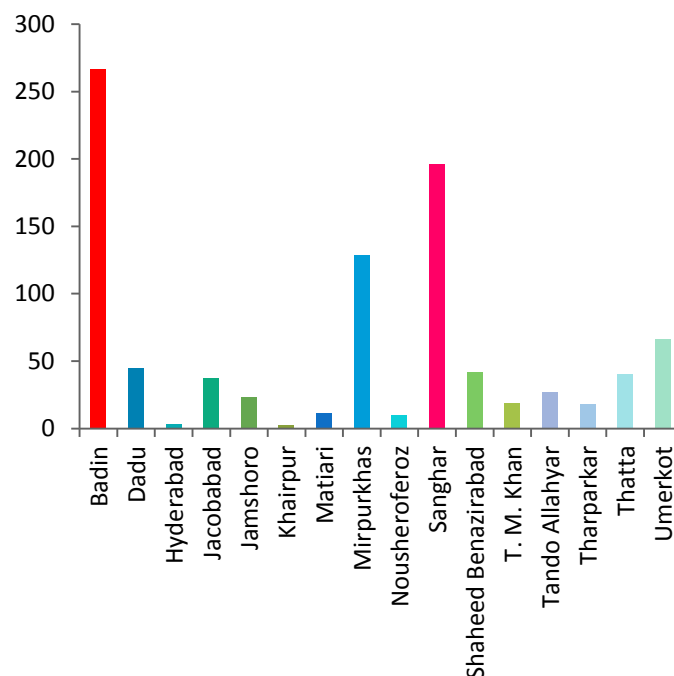
3:   Sectors

3.1:   Education Summary

- Rapid physical destruction due to floods have put more than 994,410 students out of school due to partial, full damage to school buildings and school buildings used as an emergency shelter for the flood affected people in affected districts of Sindh
- More than 33,147 teachers were affected due to these floods
- According to UN/NDMA 63% of the schools are partially damaged and in some severely affected areas like Badin and Mirpur Khas Districts this percentage goes up to 70% and 75% respectively
- UNICEF reported that around 52% Schools are partially damaged, 32% are fully damaged and 16% schools are used as IDP Shelter
- Out of 52% partially damaged schools, 81% are boy schools. Among 32% of the fully damaged 85% boys schools and a total of 1,799 schools used as IDP shelter out of which 81% are boy schools

Table 5: Districts wise School damaged in Sindh due to 2011 Monsoon

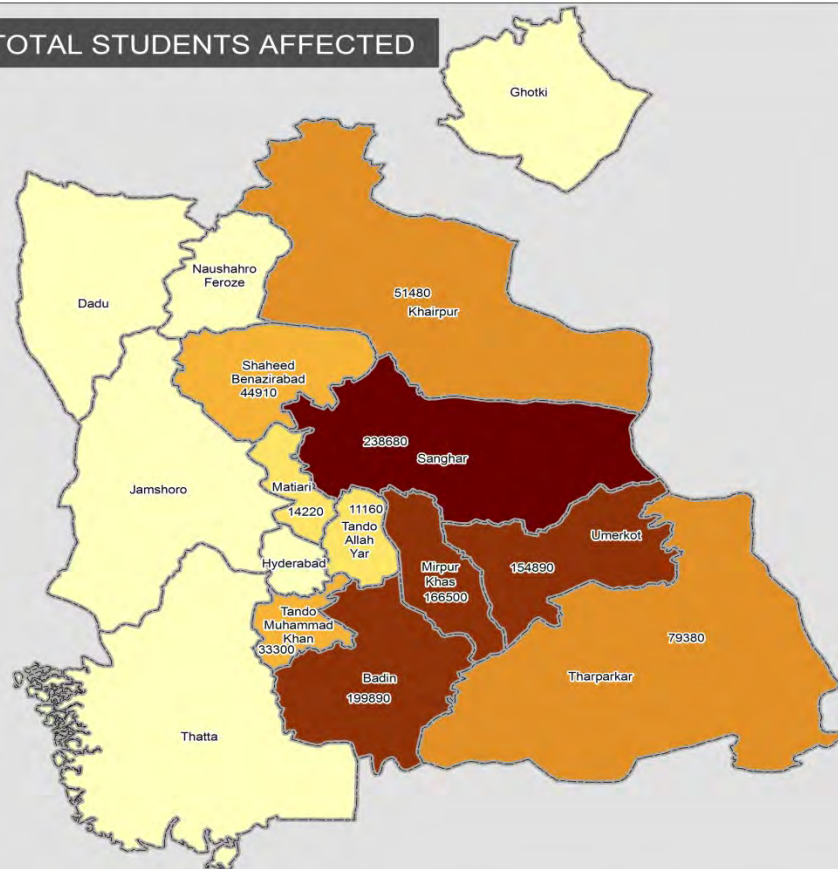| Districts	Partially Damage Schools			Destroyed Schools			Schools Usedfor IDPs			Total			Students			Teachers		
	Boys	Girls	Total	Boys	Girls	Total	Boys	Girls	Total	Boys	Girls	Total	Boys	Girls	Total	Boys	Girls	Total
Badin	1,121	179	1,300	780	129	909	9	3	12	1,910	311	2,221	171,900	27,990	199,890	5,730	933	6,663
Khairpur	345	91	436	85	49	134	2	-	2	432	140	572	38,880	12,600	51,480	1,296	420	1,716
Mirpurkhas	287	228	515	1,080	86	1,166	134	35	169	1,501	349	1,850	135,090	31,410	166,500	4,503	1,047	5,550
Sanghar	1,041	122	1,163	642	117	759	545	185	730	2,228	424	2,652	200,520	38,160	238,680	6,684	1,272	7,956
S.Benazirabad	123	76	199	112	51	163	96	41	137	331	168	499	29,790	15,120	44,910	993	504	1,497
Tando Allahyar	60	12	72	16	4	20	21	11	32	97	27	124	8,730	2,430	11,160	291	81	372
TM Khan	164	21	185	-	-	-	164	21	185	328	42	370	29,520	3,780	33,300	984	126	1,110
Umerkot	881	153	1,034	97	58	155	340	192	532	1,318	403	1,721	118,620	36,270	154,890	3,954	1,209	5,163
Tharparkar	575	185	760	95	27	122	-	-	-	670	212	882	60,300	19,080	79,380	2,010	636	2,646
Matiari	45	19	64	74	20	94	-	-		119	39	158	10,710	3,510	14,220	357	117	474
Total	4,642	1,086	5,728	2,981	541	3,522	1,311	488	1,799	8,934	2,115	11,049	804,060	190,350	994,410	26,802	6,345	33,147
Percent	81%	19%	52%	85%	15%	32%	73%	27%	16%	81%	19%	100%	81%	19%	100%	81%	19%	100%

Source: UNICEF (Education Sector)
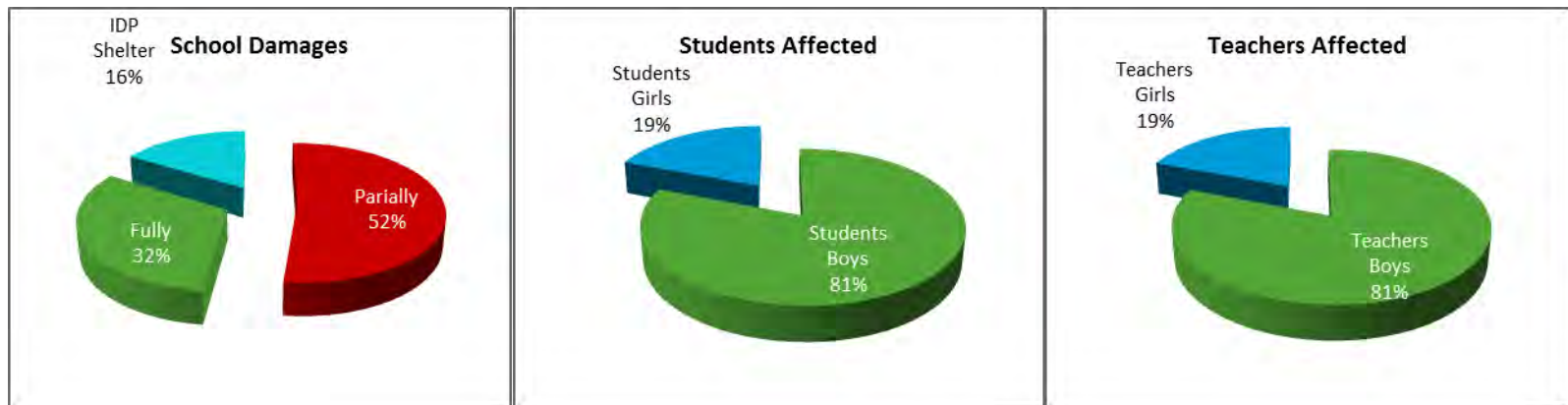
Education Map for Flood Affected Notified Districts

FLOOD 2011 EDUCATION AFFECTED - SINDH NOTIFIED DISTRICTS
November, 2011

TOTAL STUDENTS AFFECTED

Ghotki

Naushahro Feroze

Dadu

51480
Khairpur

Shaheed Benazirabad
44910

238680
Sanghar

Jamshoro

Matiari
14220

11160
Tando Allah Yar

Hyderabad

Umerkot

Mirpur Khas
166500

154890

Tando Muhammad Khan
33300

79380

Badin
199890

Tharparkar

Thatta

BOYS AFFECTED

Ghotki

Dadu   Naushahro Feroze   Khairpur
432

Shaheed Benazirabad
331

119   2228   Sanghar
Jamshoro   Matiari
97
Tando Allah Yar
Hyderabad   Mirpur Khas   Umerkot
328   1501   1318

Tando Muhammad Khan

Badin   670   Tharparkar
1910

Thatta

GIRLS AFFECTED

Ghotki

Dadu   Naushahro Feroze   Khairpur
12600

15120
Shaheed Benazirabad

3510   38160   Sanghar
Jamshoro   Matiari
2430
Tando Allah Yar
Hyderabad   Mirpur Khas   36270
3780   31410   Umerkot

Tando Muhammad Khan

Badin   19080   Tharparkar
27990

Thatta

Legend

DISTRICT BOUNDARY

STUDENTS AFFECTED

- NO DATA
- 0 - 5000
- 5000 - 15000
- 15000 - 30000
- 30000 - 50000
- 50000 - 100000
- 100000 - 150000
- 150000 - 200000
- 200000 - 250000

iMMAP   USAID
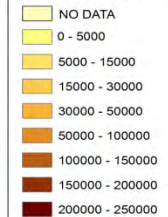
Information Management Unit
iMMAP Pakistan

Map Doc Name:
iMMAP_PAK__Sindh_Education_Affected_MapA3L_v1_01

Creation Date: Nov 29, 2011
Projection/Datum: WGS84
Web Resources: http://www.iimap.org
Nominal Scale at A3:   1:32,136,714

0   25   50   100 Kilometers
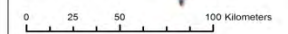
Map data source(s):
PCO, UNICEF, HCT

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

Map Locator

Damages to Schools

1,500
1,000
500

Boys   Girls   Total   Boys   Girls   Total   Boys   Girls   Total
Partially Damage Schools   Destroyed Schools   Schools Used as IDP Camps

■ Badin   ■ Khairpur   ■ Mirpurkhas   ■ Sanghar
■ S.Benazirabad   ■ Tando Allahyar   ■ Tando Muhammad Khan   ■ Umerkot
■ Tharparkar   ■ Matiari

Teachers Affected
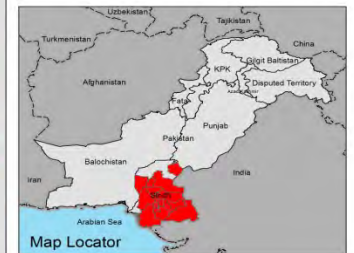
Teachers
Girls
19%

Teachers
Boys
81%

Students Affected

Students
Girls
19%

Students
Boys
81%

Damage to Schools, Teachers and Students Affected (Percentage Graphs)

Legend: Badin, Khairpur, Mirpurkhas, Sanghar, S.Benazirabad, Tando Allahyar, Tando Muhammad Khan, Umerkot, Tharparkar, Matiari

3.2: Livestock Summary

District	NDMA Reported	Multi-Sector Needs Assessment		
	Cattle Head Perished	% Cattle perished	% Poultry	% Goats/ Sheep
Badin	10,060	33%	80%	53%
Dadu	161			
Ghotki	1			
Hyderabad	32			
Jamshoro	83	38%	53%	50%
Khairpur	327	29%	75%	30%
Matiari	1,101	38%	53%	50%
Mirpurkhas	12,280	40%	60%	45%
N.Feroze	512			
Sanghar	19,040	40%	60%	45%
Sh.Benazirabad	22,646	38%	53%	50%
T.Allahyar	197	33%	80%	53%
T.M. Khan	187	33%	80%	53%
Tharparkar	30,623	40%	60%	45%
Thatta	131	33%	80%	53%
Umerkot	18,824	40%	60%	45%
Total	116,205	36%	65%	47%

Source: NDMA Losses and damages Data and Multi-Sector Needs Assessment

Damages Percentage Graphs Livestock
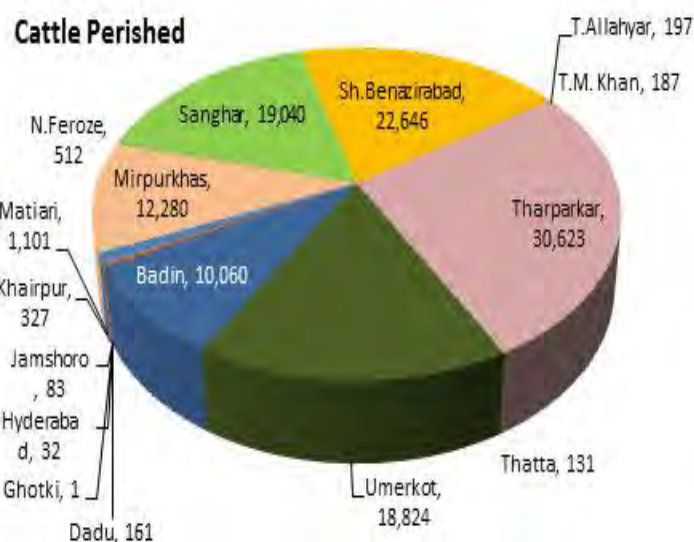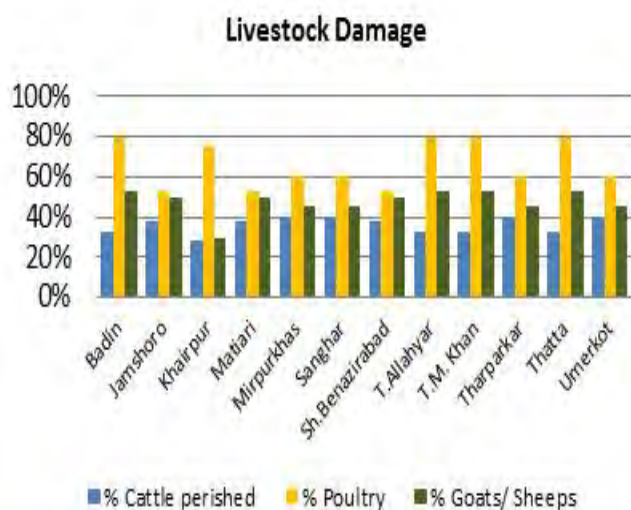
Livestock Losses Map

FLOOD 2011 LIVESTOCK AFFECTED - SINDH NOTIFIED DISTRICTS
November, 2011

GOATS AND SHEEP AFFECTED

Ghotki

Dadu Naushahro Feroze Khairpur
26687

30570
Shaheed Benazirabad

39648 Sanghar
15305
17965 Jamshoro Matiari

14835
Tando Allah Yar 18735 Umerkot
Hyderabad
14057 Mirpur Khas 23084
Tando Muhammad Khan

38131 Badin 27358 Tharparkar

39840 Thatta

CATTLE AFFECTED

Ghotki

Dadu Naushahro Feroze Khairpur
48843
59679
Shaheed Benazirabad

95293 Sanghar
29878
35073 Jamshoro Matiari

20605
Tando Allah Yar 45029 Umerkot
Hyderabad Mirpur Khas
19524 55483
Tando Muhammad Khan

52962 Badin 65754 Tharparkar

55336 Thatta

Legend

Boundary

Livestock affected
- No data
- 10000 - 20000
- 20000 - 30000
- 30000 - 40000
- 40000 - 50000
- 50000 - 75000
- 75000 - 100000

iMMAP USAID

Information Management Unit
iMMAP Pakistan

Map Doc Name:
iMMAP_PAK_Livestock_Affected_MapA3L_v1_02

Creation Date: Nov 30, 2011
Projection/Datum: WGS84
Web Resources: http://www.immap.org
Nominal Scale at A3: 1:32,136,714

0 25 50 100 Kilometers

Map data source(s):
PCO,Livestock Census,NDMA
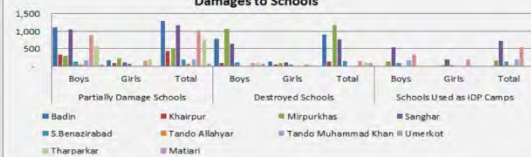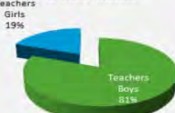
Disclaimers:
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material on this map do not imply the expression of any
opinion whatsoever on the part of iMMAP concerning the
legal status of any country, territory, city or area or of its
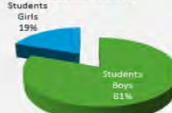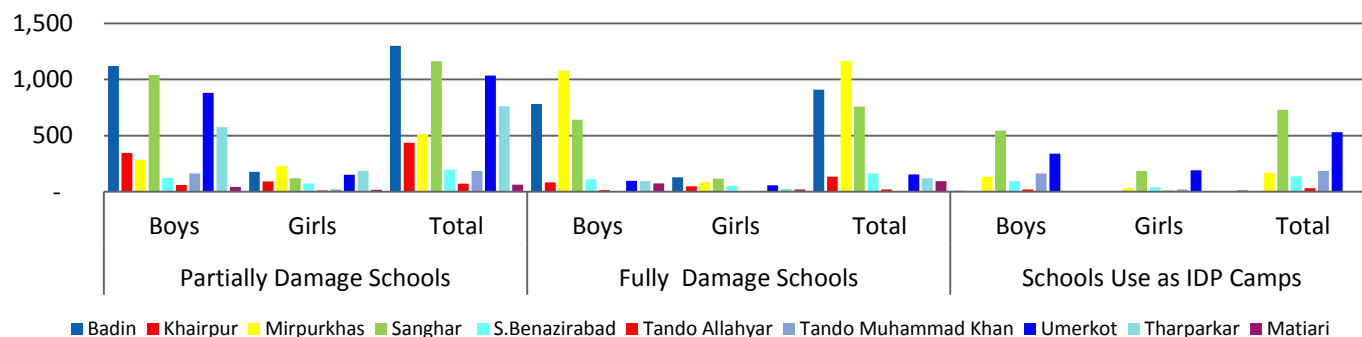authorities, or concerning the delimitation of its frontiers or
boundaries.

Livestock Damage

■ % Cattle perished ■ % Poultry ■ % Goats/ Sheep

Cattle Perished

Sanghar, 19,040
Sh.Benazirabad, 22,646
T.Allahyar, 197
T.M. Khan, 187
Tharparkar, 30,623
N.Feroze, 512
Mirpurkhas, 12,280
Matiari, 1,101
Badin, 16,060
Khairpur, 327
Umerkot, 18,824
Jamshoro, 83
Hyderabad, 32
Ghotki, 1
Dadu, 161
Thatta, 131

Map Locator

3.3: Food and agriculture Summary

- According to Multi-Sector Need Assessment final assessment, 43 percent of the food assets of the people were completely lost; 46 percent were partially lost; and 11 percent were not affected
- Multi-Sector need assessment says that 2,138,170 acres of crop area affected which is 33 percent of the total affected land
- Severely food insecure affected population considered to be 43%, whether they are in temporary settlements or they have returned home, and require assistance
- Female headed HHs which are 59% tend to be more food insecure
- Most affected are in Mirpur Khas, Tharpakar, Umerkot, Sanghar, Badin, T.Allah Yar, Thatta and T.M. Khan
- The HHs with poor access to food have also poor food consumption
- The primary food source is from purchases i.e. 75%
- Population's food sources in Badin, T.Allah Yar, Thatta and T.M. Khan is 27% from emergency relief.
- Prices have increased by 25% for rice; wheat by 12%; potato by 44% and onion by 57% compared to July 2011 and will impact on food security of the vulnerable households.
- FBS reported a percentage change of 13.89 and 23.32 in CPI and WPI and this re-instate the above mentioned findings
- Daily wage labor increased by 11%, but the rate of increase in the daily wage is less than that of food prices.

Table 6: Agriculture damage

District	Area Affected (Acres)	Crop Area Damaged	%
Badin	984,805	375,718	38%
Dadu	187,811	97,248	52%
Ghotki	258,661	68,679	27%
Hyderabad	113,333	26,227	23%
Jamshoro*	30,086	39,133	130%
Khairpur	388,638	182,891	47%
Larkano	12,793	5,396	42%
Matiari	160,970	83,739	52%
Mirpurkhas	819,833	171,522	21%
N.Feroze	698,434	73,660	11%
Sanghar	927,201	356,473	38%
Sh.Benazirabad	962,800	290,000	30%
T.Allahyar	369,685	81,645	22%
Tharparkar	51,782	12,647	24%
Thatta	198,111	164,889	83%
Umerkot	350,428	108,303	31%
Total	6,515,371	2,138,170	33%

Source: NDMA Losses and Damages

food asset losses

Not affected 11%

Completely lost 43%

Partially Lost 46%
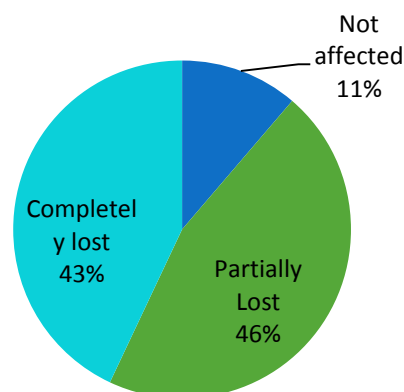
crop area affected as a % of total affected area
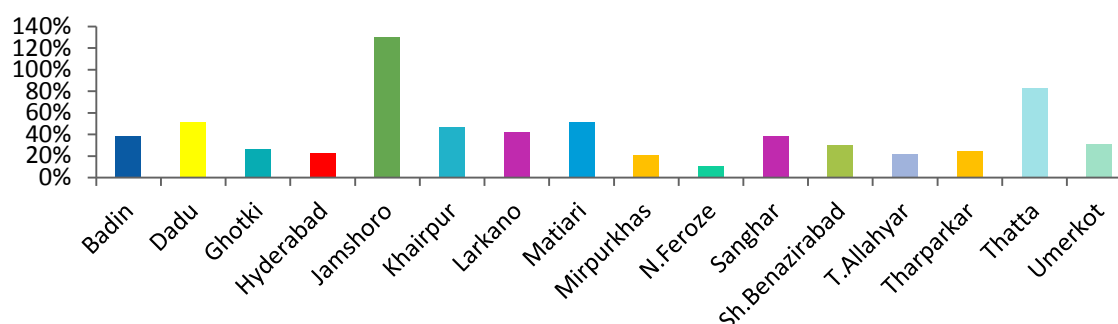
Normalized Difference Vegetation Index

FLOOD EXTENT AND VEGETATION HEALTH - SINDH NOTIFIED DISTRICTS
30th November, 2011

Vegetation Health (NDVI) 2008
30th November Situation

Vegetation Health (NDVI) 2009
30th November Situation

2011 Flood Extent of 23 september & 30 november
in focus

Ghotki

Vegetation has been decreased in november 2010 to november 2011 Flooded water are still there which decreased vegetation & crop growth.

Dadu   Naushahro Feroze   Khairpur

The Normalized Difference Vegetation Index (NDVI) has been in use for many years to measure and monitor plant growth (vigor), vegetation cover, and biomass production from multispectral satellite data. Deep green color shows maximum vegetation health assuming good agricultural practices & crop growth in central notified districts.

Shaheed Benazirabad

Vegetation Health (NDVI) 2010
30th November Situation
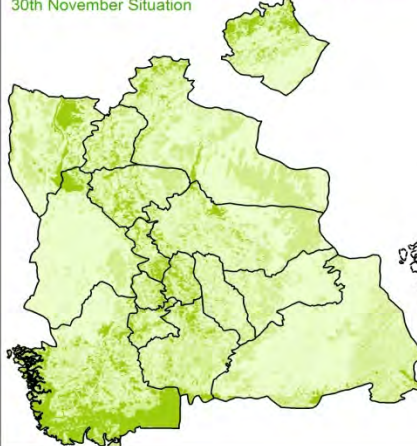
Vegetation Health (NDVI) 2011
30th November Situation

Sanghar

Jamshoro   Matiari

Tando Allah Yar
Hyderabad   Mirpur Khas   Umerkot

Tando Muhammad Khan

Tharparkar

Badin

Thatta
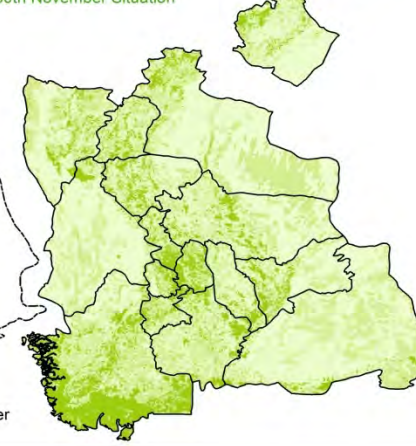
Flood Extent: showing the water recession from 23rd september 2011 to 30th november 2011. It has been observed that most of water from upper notified districts has been receded.

Legend
Boundary
Flood Extent
30th November Flood
23rd Septemeber Flood
Dhands
Vegetation
Minimum
Maximum

iMMAP   USAID

Information Management Unit
iMMAP Pakistan

Map Doc Name:
iMMAP_PAK_FloodExtent_VegetationHealth_MapA3L_v1_01

Creation Date: Dec 07, 2011
Projection/Datum: WGS84
Web Resources: http://www.iimap.org
Nominal Scale at A3: 1:32,136,714

0   25   50   100 Kilometers

Map data source(s):
PCO,NASA

Disclaimers:
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Map Locator

3.4:   Shelter

- According to NDMA reports,1,468,928 houses have been damaged
- Among these, 46 % are partially damaged and can be used as a living space to some extent
- Destroyed houses percentage goes upto 54, whithin this Mirpurkhas and Badin being most affected with 74% and 55%, respectively, of the destroyed houses
- According to multi-cluster assessments, 80% of the population requires plastic sheets and 89% requires blankets for the upcoming winter season
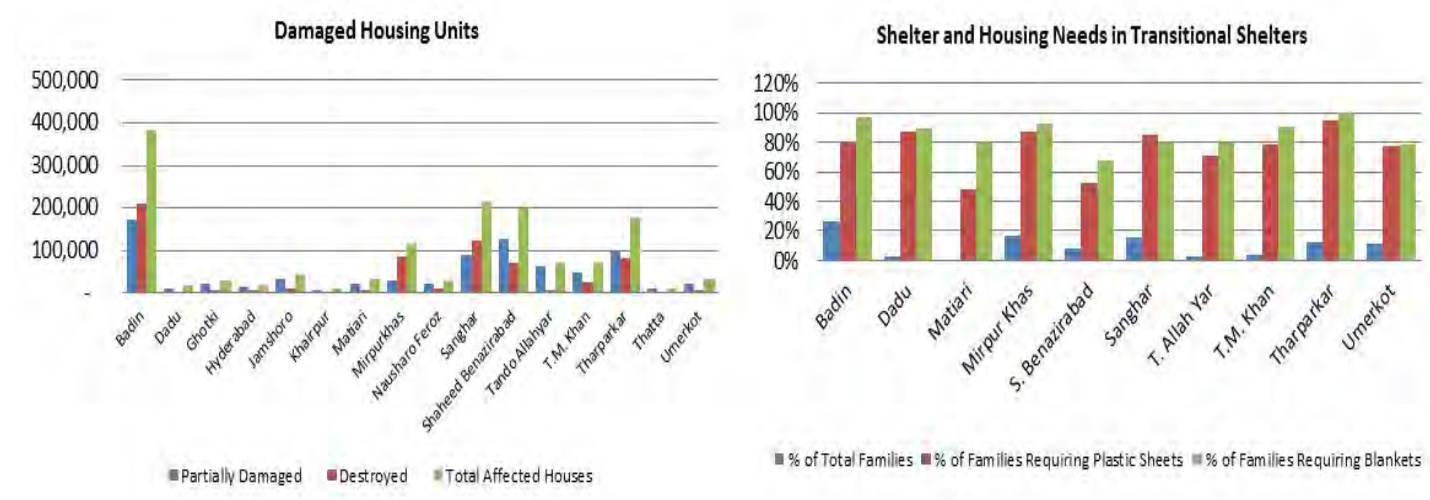
Source: NDMA Losses and damages Data and Multi-Sector Needs Assessment

According to the multi-sector needs assessment of November 2011, an estimated 5,000 temporary settlements shelter around 144,000 families. Among these settlements 59% are spontaneous, 74% of these transitional shelter sites have an official camp management structure. A total of 72% of site residents reported to remain in settlements for one months and rest of 28% more than one month. In multi-sector assessment people identified:

Protection:
The percentage for the women and children that feel unsafe in the Transitional Shelters is 27%; 21% of families have no adult men at the site due to economic reasons; 26% of families have a lack of general clothing; and people in160 Transitional Shelters reported friction within the site or with host communities.

WASH:
Among Individual Transitional Shelters 74% have no latrines; and 35% of residents have to walk more than 30 minutes to get clean water.

Agriculture:
As a whole 70% of sites do not have enough feed for animals.

Health:
Percentage for those TS reported cases of diarrhoea 65, 20% of TS reported cases of air/water borne diseases, and 34% of TS reported cases of high fever.

Food & Nutrition:
Percentage of TS indicate one or no food distribution received (one week ration) 69%, and only 8% of Transitional Shelters have access to supplementary feeding programs.

3.5: Health

According to the 64th weekly Health and Epidemiological Bulletin by **DEWS** Pakistan

Table 7: Leading Causes of Seeking Health Care

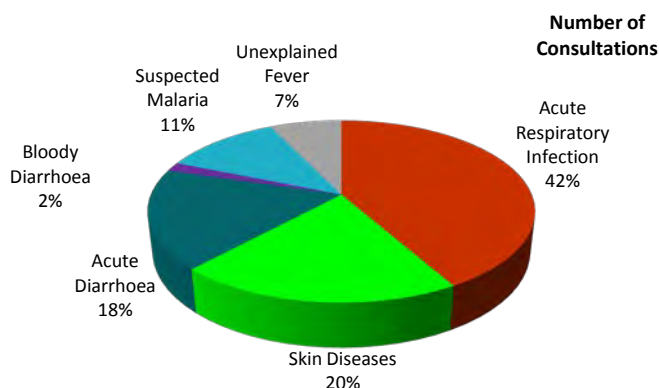|		
Acute Respiratory Infection	11,429,695	42%
Skin Diseases	5,490,946	20%
Acute Diarrhea	4,868,620	18%
Bloody Diarrhea	431,245	2%
Suspected Malaria	3,165,876	12%
Unexplained Fever	1,965,702	7%
Total Consultations	**27,352,084**	**100%**

Number of Consultations

No. of patients in notified districts for reported diseases

	(AWD)		(BD)		Dengue		Malaria		Measles		(NNT)		Pertussis		Total	Total
Districts	**F**	**M**	**F**	**M**	**F**	**M**	**F**	**M**	**F**	**M**	**F**	**M**	**F**	**M**	**F**	**M**
Badin	4	11													4	11
Benazirabad			4	1											4	1
Dadu	0	2					11	15			0	1			11	18
Ghotki					0	2									0	2
Hyderabad	1	1													1	1
Jamshoro									0	1			1	1	1	2
Khairpur											1	1			1	1
Matiari	1	1											29	29	30	30
Mirpur khas	3	2													3	2
N Feroze									0	1					0	1
S. Benazirabad									0	1					0	1
Sanghar	0	1									0	0			0	1
T Allah Yar	0	1	2	4											2	5
Tharparkar	7	1													7	1
Thatta	6	14									0	1			6	15
TM Khan	1	3													1	3
Umer Kot	3	3	1	5											4	8
Grand Total	**26**	**40**	**7**	**10**	**0**	**2**	**11**	**15**	**0**	**3**	**1**	**3**	**30**	**30**	**75**	**103**

Patients by Date and Age

Date	<5M	>5M	<5F	>5F	Total
28-Oct	1	5	0	3	9
29-Oct	4	6	1	2	13
30-Oct	0	2	0	0	2
31-Oct	5	5	4	2	16
1-Nov	4	1	0	0	5
2-Nov	8	13	3	14	38
3-Nov	23	26	21	25	95
Grand Total	**45**	**58**	**29**	**46**	**178**

Patients by Disease and Age

Disease	<5M	>5M	<5F	>5F	Total
(AWD)	16	24	9	17	66
(BD)	3	7	1	6	17
Dengue	0	2	0	0	2
Malaria	4	11	5	6	26
Measles	3	0	0	0	3
(NNT)	3	0	1	0	4
Pertussis	16	14	13	17	60
Grand Total	**45**	**58**	**29**	**46**	**178**

Patients by Date

Patients by Disease
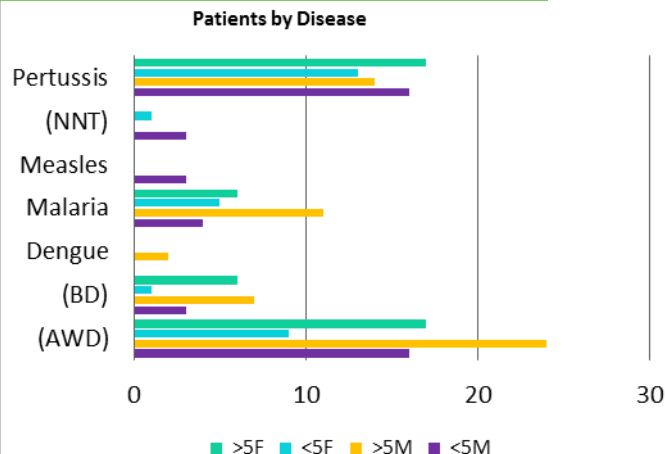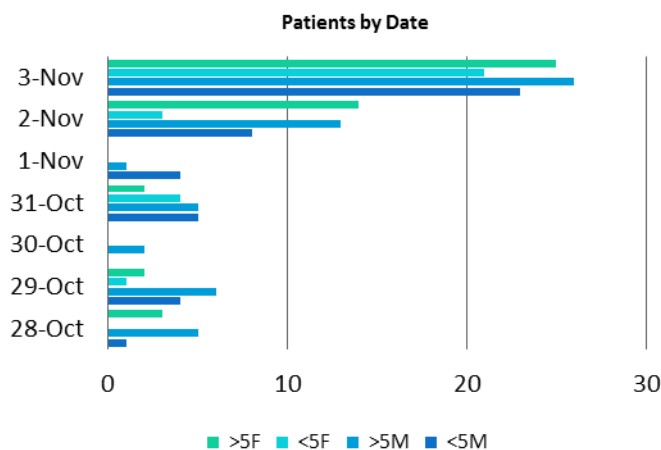
Health Status map for flood affected notified districts

HEALTH SITUATION - SINDH NOTIFIED DISTRICTS
November, 2011

Relief Goods Distributed by GOP, Pakistan Military, and Private Sector – does not include UN Agencies

Items	Army	Bait ul Mal	ERC	Metro	NBP	NDMA	PDMA	PRCS	Sindh Bank	SRSP
Food										
Family Ration Packs (18 kg) for 7 days										
Family Ration Packs (35 kg) for 14 days	8,136	74,355		3,000	15,000	2,473,944	1,049,879	22,792	1,000	
Biscuits (6x24 pk) carton							41			
Dal Channa (50 kg bag)							720			
Dates, cartons							915			
Milk Powder 400g Can (24/Carton)							16			
Rusks							1,000			
Sugar (50 kg Bags)							780			
Tea leaves (36 pk/Carton)							25			
Monthly Food Rations (~100 kg) WFP										
Bottled Drinking Water (6 L) Packs							1,200			
Shelter										
Tents		2,000	20,000			120,460	6,857	2,000	2,000	14,507
Household Items (NFIs)										
Floor Mat						35,000	7,400	800		1,471
Sleeping Mats								1,510		
Candles (Cartons)							2			
First Aid Kits										360
Match boxes (2500/Carton)							11			
Mosquito Spray						10,000				
Kerosene Stove								3,680		
Jerry Can (10 L)						25,000	6,050	1,650		26,734
WASH										
Hygiene Kits								3,635		6,259
Hygiene Sessions										3,715
Hygiene Kits for females										
Insect Repellent								1,233		
Plastic Lota										597
Sanitary Pad										374
Soap										980
Water Purification Items						17				
Water Purification Tablets						9,506,000		22,000		48,284
Community Items										
Boats with BMs Engines						10				
De-watering Pumps							100			
Pit Latrine Construction										985
Water Bladder										2,108
Cash										
Cash in Rs Million										