WASH KAP Baseline Survey Report
(RUSFAD: Phase-III)

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Glossary

AJK:	Azad Jammu & Kashmir
BHUs:	Basic Health Units
BLS:	Baseline Survey
CLTS:	Community Led Total Sanitation
CSOs:	Civil Society Organizations
CSPro:	Census & Survey Processing
DHQs:	District Head Quarters
DPDP:	District Population & Development Profile
FGDs:	Focus Group Discussions
GB:	Gilgit-Baltistan
HH:	Households
Hrs:	Hours
IDIs:	In-Depth Interviews
IEC:	Information, Education and Communication
IPs:	Implementing Partners
KPK:	Khyber Pakhtunkhwa
KAP:	Knowledge, Attitude & Practice
Km:	Kilometer
LHVs:	Lady Health Visitors
LHWs:	Lady Health Workers
MCH:	Mother & Child Health
NATPOW:	National Trust for Population Welfare
NGOs:	Non-Governmental Organizations
NIPS:	National Institute of Population Studies
PCU:	Project Coordination Unit
PD:	Project Director
PI:	Principal Investigator
PIU:	Project Implementation Unit
PKR:	Pak Rupee
PLAN:	Plan International, Pakistan
RHCs:	Rural Health Centers
RUSFAD:	Rural Sanitation in Flood Affected Districts
SPSS:	Statistical Package for Social Sciences
TB:	Tuberculosis
THQs:	Tehsil Head Quarters
TV:	Television
WASH:	Water, Sanitation and Hygiene
WHO:	World Health Organization
WBDs:	Water Borne Diseases

Message from Chairperson, NATPOW

It is a matter of pride for me that the National Trust for Population Welfare (NATPOW) and the National Institute of Population Studies (NIPS) have jointly completed this Knowledge, Attitude and Practices (KAP) Baseline Survey (BLS) on Water, Sanitation and Hygiene (WASH) with funds from Plan International-Pakistan, and close collaboration of NATPOW Affiliate Civil Society Organizations (CSOs) located at grassroots level in the 17 Surveyed Districts of Punjab, Sindh, KPK and Balochistan.

This WASH KAP BLS Report will be used by Plan Pakistan specifically for their UNICEF funded RUSFAD Project (Phase-III) aiming at up-scaling Rural Sanitation in the 17 flood affected Districts of Pakistan. In this context, the Report provides a bench mark data on basic sanitation, open defecation practices, latrine use, safe drinking water, water born diseases, hand washing and hygiene related practices, and socioeconomic status of the targeted communities with a particular focus on sample households ensuring that the data depicts the real scenario in the flood affected areas of RUSFAD (Phase-III) Project Districts.

I hope that this BLS Report would be beneficial also for other agencies, the policy makers, researchers, WASH planners and development practitioners for taking evidence based decisions and working out strategies for making efficient investments to improve WASH situation in the flood affected areas.

I congratulate Mr. Iftikhar Durrani, Chief Executive NATPOW, Mr. Amanullah Bhatti, Director (R&S) NIPS, Dr. Nasser Mohiuddin, Principal Investigator NATPOW, Mr. Faateh ud Din, Co-Principal Investigator NIPS, their Core Team (Ms. Noorus Sehar, Dr. Sumaida Anwar, Ms. Aysha Sheraz, Ms. Rabia Ahmed Syed, Mr. Ali Anwar Buriro) and the Support Team for producing this Document and I urge the NATPOW & NIPS to continue expanding intellectual knowledge-base leading to improved Healthcare in Pakistan.

I am grateful to UNICEF and Plan International-Pakistan for providing funds, especially Mr. Haider W. Yaqub, Former Country Director, Mr. Rashid Javed, Acting Country Director, Mr. Imran Yusuf Shami, Project Support Manager (Implementation), Mr. Islam ul Haq, Project Manager-WASH and Mr. Muhammad Nasir, MER Coordinator, for their close collaboration, guidance and support throughout the Survey and preparation of this WASH KAP BLS Report.

Senator Suriya Amiruddin
Chairperson, NATPOW

Message from Country Director, Plan International

Plan is an international, humanitarian, child cantered, development organization devoted to improving the lives of children. We are committed to achieving a world in which all children realize their full potential in societies that respect people's rights and dignity.

Plan's vision is "*a world in which all children realize their full potential in societies which respect people's rights and dignity*" Plan's mission "*Plan strives to achieve lasting improvements in the quality of life of deprived children in developing countries through a process that unites people across cultures and adds meaning and value to their lives by*: *enabling deprived children, their families and their communities to meet their basic needs and to increase their ability to participate in and benefit from their societies, fostering relationships to increase understanding and unity. Promoting the rights and interests of the world's children."*

Plan Pakistan began operations in Pakistan in 1997, with the main office is in Islamabad and field offices in the Districts of Chakwal, Vehari, Multan, Thatta, Sukkur and Islamabad. Plan is establishing FRU in the District Sanghar to cater the needs of the flood affected communities. Plan Pakistan's program methodology centers on a child-cantered community development (CCCD) approach to guarantee that children, families and communities are active and leading participants in their own development. A core intervention under "Right to health and health services" is our water and sanitation program which focuses on ensuring that children live in secure, safe and healthy habitats. In order to achieve the Millennium Development Goals (MDGs) to halve the proportion of people without access to safe drinking water and basic sanitation by 2015, each of Plan's country programs prioritizes water and sanitation programs in both urban and rural settings.

I am delighted to present the knowledge, attitudes and practices base line survey report on RUSFAD–Up scaling Rural Sanitation in nineteen flood affected Districts of Pakistan (Phase III).

The Project has been launched to ensure Total Sanitation for grass roots level communities, particularly for women, children and disadvantaged communities by Mobilization, triggering, using IEC material, mass media campaign having the villages Latrines and hand washing facilities at their houses functional, operational and thereby improving the target communities' health & hygiene situation in the flood affected Districts of Pakistan. The majority people live in the rural area of Pakistan particularly women and children are marginalized and more vulnerable to health & hygiene. In order to provide access to health & hygiene facilities to these target communities RUSFAD Project activities is being carried out, IEC material and street theaters organized effectively. Since July –August 2010 floods the situation of flood affected families has deteriorated,

but the situation of sanitation in flood affected district prior to the floods was almost same in the past as it is now as they were almost nonexistent. This is a much needed yet an ambitious programme that has been launched by UNICEF & Plan to raise awareness and mobilize communities on the importance of sanitation and hygiene. This Baseline Survey Report would be a bench mark for the project, and endeavors' in making the village Open defecation free (ODF).

The report identified the areas where specific attention should be given in order to facilitate the villages WASH/ ODF. The current nature of WASH situation in the rural areas, place of defecation, the level of Communities Knowledge, Attitude, Practices and confidence on village sanitation, why communities open defecate, and why they don't wash hand at critical times, the level of communities' knowledge on health and hygiene practices. Issues relating to WASH have been explored and analyzed meticulously in the report.

I hoped that this Report would be beneficial to the policy Makers, researchers, planners and development practitioners apart from the use of the report in the overall project activities. I would like to thank UNICEF in providing technical and financial assistance to the project.

Rashid Javed
Acting Country Director – Plan Pakistan

Foreword

I am pleased to present the RUSFAD KAP Baseline Survey/Report with respect to seventeen Floods affected Districts, which provides information/data on the situation of knowledge, attitude and practices on health and hygiene and defecations practices in the flood affected areas of RUSFAD Project District. The baseline will suggest measures for policy formulation and the effectiveness of population health and Hygiene initiatives can be gauged. The data for the survey were collected from July 2011 to August 2011.

With the given objective, the WASH KAP baseline collected data on socioeconomic conditions of the target rural communities with a particular focus on basic sanitation and open defecation status, latrine use, hygiene related diseases, safe drinking water, waterborne diseases and hand washing practices in the flood affected communities in general and of the sample households in particular.

After the executive summary, this report has a sections on introduction, background, objectives of the baseline survey, scope of the baseline survey, institutional framework, survey design and methodology, ethical considerations, geographical spread of the baseline survey, district profiles, including sections on: material and methodology, inception and preparatory phase, fieldwork phase, database processing, findings & results, population characteristics, Water, sanitation, hygiene, community, focus group discussions (FGDs) and in-depth interviews (IDIs),Conclusions and recommendations, list of contributors. Appendices, household questionnaire, men's questionnaire, community questionnaire, FGDs guidelines, IDIs guidelines, additional tables & selected pictures

These indicators are presented in graphical and tabular forms. For each indicator the report includes Provinces and respective district information/data, charts regarding KAP Health and Hygiene prevailing in the program areas. The RUSFAD, KAP baseline report –Phase-III on PDF version can be obtained/downloaded from the Plan International, Pakistan website at www.Planpakistan.org

This is a descriptive report and there is a wealth of information in the survey dataset that may be of specific interest. For these reasons we encourage as many people as possible to analyze and use the data for their development work, however we would expect this work to be duly acknowledged. Comments on the RUSFAD-KAP Baseline Survey Phase-III are welcome.

I thank all the individuals and organizations who contributed their time and expertise to assist in the development and conduct of this base line survey in 2011, and am especially thankful to UNICEF and its WES team especially Irfan Alrai, WES specialist Unicef, Omar El- Hattab former chief of WES Unicef, Pakistan and Haider W. Yaqub, former Country Director, Plan International, Pakistan for their support and guidance.

Imran Yusuf Shami
Project Support Manager (Implementation),
Plan International, Pakistan-Islamabad

Acknowledgments

The Baseline Survey (BLS) conducted primarily to assess the gravity of Water, Sanitation & Hygiene (WASH) related issues on basis of the information collected from the target communities and analyzed to determine their Knowledge, Attitude and Practices (KAP), is the result of the ceaseless efforts of Teams at the National Trust for Population Welfare (NATPOW) and the National Institute of Population Studies (NIPS).

We appreciate and acknowledge the concerted & untiring efforts, interest and dedication of Dr. Nasser Mohiuddin, Principal Investigator NATPOW, Mr. Faateh ud Din, Co-Principal Investigator NIPS, and their Core Team comprising of the Researchers (Ms. Noorus Sehar, Dr. Sumaida Anwar, Ms. Aysha Sheraz, Ms. Rabia Zafar, Mr. Ali Anwar Buriro) and the Support Teams (Mr. Faisal Nazir, Mr. Waqas Imran, Mr. Hassan Raza & others), on successful completion of the BLS activities and its Report for the RUSFAD Project (Phase-III) of the UNICEF & Plan International-Pakistan.

We are deeply indebted to the NATPOW Affiliate Civil Society Organizations (CSOs) the Field Team Members who worked for this BLS as our Implementing Partners (IPs) in Sindh, KPK, Balochistan, AJK and Gilgit-Baltistan, NATPOW Regional Officers at Karachi and Peshawar, NIPS Quality Control and Data Processing Teams for bringing this joint success to NATPOW, NIPS and UNICEF & Plan International-Pakistan.

We express our appreciation also to Plan International-Pakistan for providing funds to NATPOW & NIPS for the WASH KAP BLS and our special thanks are for Mr. Haider W. Yaqub, Former Country Director, Mr. Rashid Javed, Acting Country Director, Mr. Imran Yusuf Shami, Project Support Manager (Implementation), Mr. Islam ul Haq, Project Manager-WASH, Ms. Saadia Yaqoob, Deputy Project Director and Mr. Muhammad Nasir, MER Coordinator, for their continued support throughout the Survey and preparation of this Report.

Iftikhar Durrani,
Chief Executive Officer, NATPOW

Amanullah Bhatti,
Director (R&S), NIPS

Preamble

It is indeed a great pleasure for us to present this Baseline Survey (BLS) Report on Knowledge, Attitude & Practices (KAP) regarding Water, Sanitation & Hygiene (WASH) issues among the communities affected by floods during 2010 in 17 selected Districts of Punjab (05), Sindh (05), KPK (05) and Balochistan (02). We believe that this BLS conducted primarily to assess the gravity of WASH related issues on basis of the information collected from the target communities and analyzed to determine their Knowledge, Attitude and Practices (KAP), depicts the real scenario in the flood affected areas of the surveyed Districts.

The WASH KAP BLS has been conducted by the Core Teams at the National Trust for Population Welfare (NATPOW) and the National Institute of Population Studies (NIPS). The Core Teams comprised of the Researchers (Ms. Noorus Sehar, Dr. Sumaida Anwar, Ms. Aysha Sheraz, Ms. Rabia Zafar, Mr. Ali Anwar Buriro) and the Support Teams (Mr. Faisal Nazir, Mr. Waqas Imran, Mr. Raza Hassan, NATPOW Regional Officers at Karachi and Peshawar, NIPS Quality Control and Data Processing Staff & others). NATPOW Affiliate Civil Society Organizations (CSOs) and the Field Team Members have also worked as our field Implementing Partners (IPs) in Punjab, Sindh, KPK and Balochistan.

The WASH BLS has been completed with the generous financial support from United Nations Children's Fund (UNICEF) and technical guidance from Plan International-Pakistan, especially Mr. Islam ul Haq, Project Manager-WASH and Mr. Muhammad Nasir/ Mr. Saeed Ahmad, MER Coordinators, for which we feel indebted to them. We are grateful also to Mr. Haider W. Yaqub, Former Country Director, Mr. Rashid Javed, Acting Country Director, Mr. Imran Yusuf Shami, Project Support Manager (Implementation), Ms. Sadia Yaqoob, Deputy Project Director and Ms. Farah Naz for their support throughout the BLS process.

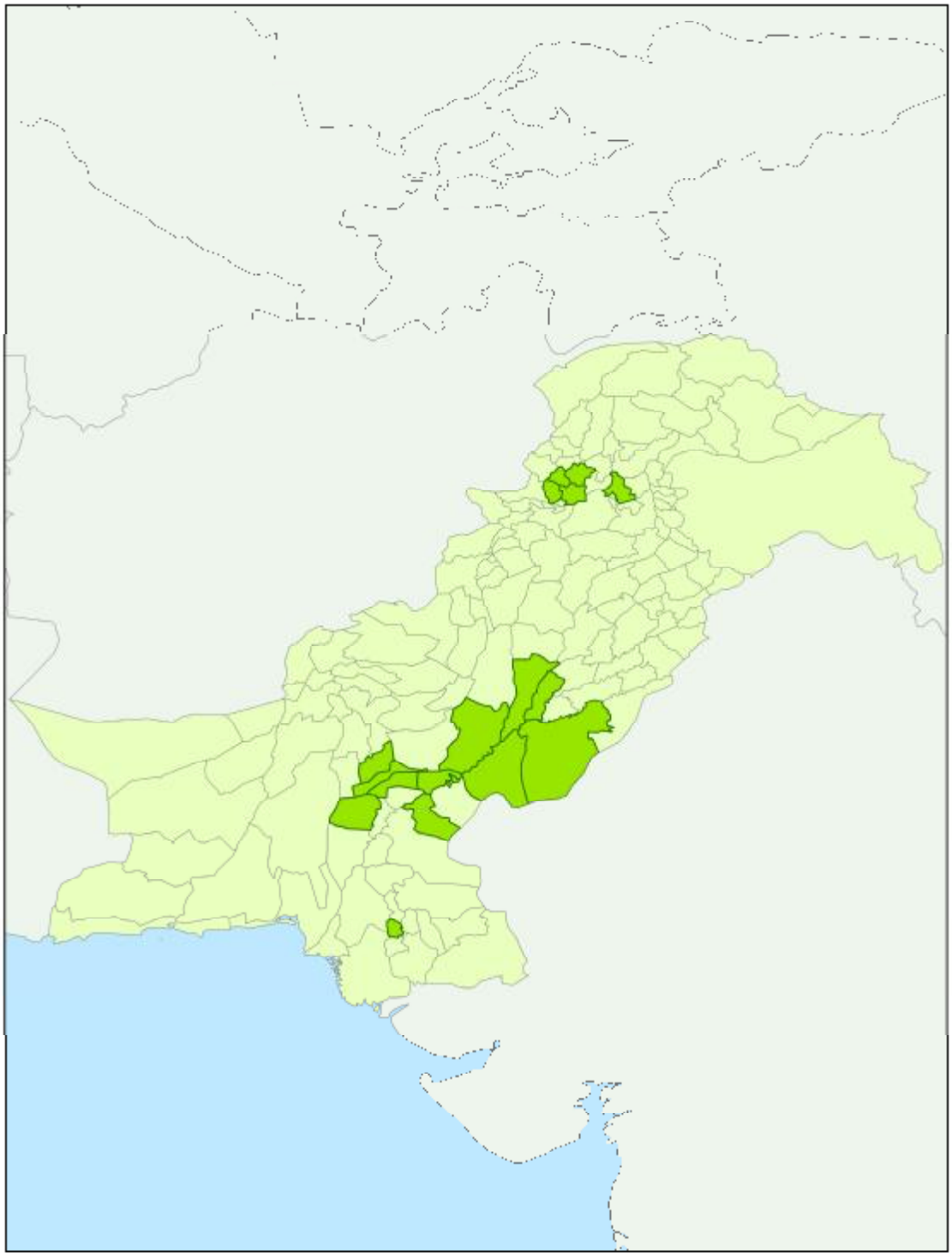
This WASH KAP BLS is certainly an important milestone in the history of NATPOW & NIPS and it will be fully utilized by the Plan Pakistan for their RUSFAD Project launched to ensure Total Sanitation for grass roots level communities, particularly for women, children thereby improving the health & hygiene situation of target communities in the 17 flood affected Districts of Pakistan. The WASH KAP Baseline Report (RUSFAD: Phase-III on PDF version can be obtained/ downloaded from the Plan International, Pakistan website at www.planpakistan.org

We would like to express our profound gratitude for Senator Suriya Amiruddin, Chairperson NATPOW, Mr. Iftikhar Durrani, Chief Executive Officer NATPOW and Mr. Amanullah Bhatti, Director (R&S) for their continued encouragement and we feel obliged to all members of the Core Teams, Support Teams, CSOs and the Field Teams for their untiring efforts and contribution for completion of this BLS and its Report.

Dr. Nasser Mohiuddin
Principal Investigator/ Director, NATPOW

Faateh ud din Ahmad
Co-Principal Investigator/DPM, NIPS

MAP of Pakistan



EXECUTIVE SUMMARY

During July-August 2010, monsoon rains caused the worst floods in past 80 years of Pakistan. Flooding started on July 22, 2010 after a few hours of rainfall in Balochistan when a dam burst 43 Km upstream the city of Sibi and gushing waters from the Kech Kaur River inundated more than 20 villages along its banks. The second spell played havoc across the Khyber Pakhtunkhwa when the downpour reached some 900 mm in a matter of few hours before flowing south into Punjab and Sindh (Source: National Disaster Management Authority (NDMA).

The 2010 Floods caused widespread devastation and chaos with human lives and infrastructure in all the four Provinces of Pakistan. In 82 Districts, more than 20,250,000 people (including 10,000,000 children) were affected, with 10,400,000 affected more severely in 12 Districts of Punjab, 19 in Sindh, 24 in KPK, 13 of Balochistan, 07 in AJK and 07 in Gilgit-Baltistan. A large number of people became homeless and displaced; livestock, houses, bridges, link roads and also the communication infrastructure had been washed away, and shortages of food, water, clothing, shelter, and supplies made survival still difficult for the unfortunate victims. Flashfloods and landslides uprooted thousands of acres of farmland also.

Non-availability of the safe drinking water coupled with bad sanitation and poor hygiene posed a high risk of water born diseases like diarrhea, cholera and malaria, aggravating the already compromised status of families, especially the children and pregnant & lactating mothers, and thus potentially resulting in to increased morbidity and mortality. According to Pakistan's Flood Emergency Plan (September 18, 2010), 13, 300,000 people were in the need of safe drinking water and basic sanitary assistance.

It is worth mentioning here that since before floods in 2010, Pakistan faced considerable challenges in achieving the Millennium Development Goals (MDGs) and ranked 144 on the 2010 Human Development Index. Pre-flood data showed that in Pakistan, almost a quarter of all the <5 children suffered global acute malnutrition and in rural areas 60% of people were without adequate sanitation facilities. This situation provides an opportunity to intervene for achieving total sanitation in a strategic manner during the post-flood reconstruction.

In the above context, it is important to seek guidance from the National Sanitation Policy 2006 which highlights social mobilization as a key component in addressing sanitation issues at household level in the rural areas. The Policy envisions the creation of an open defecation free

environment with safe disposal of liquid and solid wastes and promotion of the health and hygiene practices. It provides also the broad guidelines and support to the Federal/ Provincial/ Local Governments and Development Authorities to enhance the sanitation coverage through formulation of their sanitation strategies, plans, programs and projects. The Policy aims to promote the Community Led Total Sanitation Approach and articulates a Total Sanitation Model.

Thus, following the National Sanitation Policy, efforts for total sanitation need to be incorporated right from beginning of reconstruction so as to harness the spirit of 'Building Back Better' and this is the theme of the Project conceived by the Plan with the Title 'Rural Sanitation in Flood Affected Districts (RUSFAD: Phase-II)' which aims to reach out 2,100,000 people (1,050,000 children <18, 462,000 women and 588,000 men) in 19 flood affected Districts to protect them from water, sanitation & hygiene (WASH) related diseases. However, a KAP Baseline Survey (BLS) was needed before launch of the Project.

Primary objective of the BLS was to assess the gravity of WASH issues on basis of the information collected from the target communities and analyzed to determine their Knowledge, Attitude and Practices (KAP) regarding WASH, with special focus on sanitation coverage and open defecation status ensuring that the data depicts the real scenario in the flood affected areas of RUSFAD Project Districts.

In line with scope of the BLS, the Institutional Framework for the WASH KAP BLS comprised of the Plan International-Pakistan for providing funds and the National Trust for Population Welfare (NATPOW) executed the Survey in collaboration with the National Institute of Population Studies (NIPS) and the local community-based Affiliated Civil Society Organizations (CSOs) as the Implementing Partners in the 19 Districts.

Finalization of BLS Tools (Questionnaires for Households-HH, Men and Community, and Guidelines for Focus Group Discussions (FGDs) and In-Depth Interviews (IDIs) was followed by 03-Days Comprehensive Training of 19 male and 19 female enumerators from Sindh (06), KPK (10), Balochistan (04), AJK (06) and GB (12), jointly conducted by WASH experts and researchers from NATPOW and NIPS at Islamabad.

A total of 323 clusters and 4515 households were selected and during the Months of August & early September, 2011, fieldwork was carried out in the 17 selected Districts of Punjab (Bahawalpur, Multan, Muzaffargarh, Rahim Yar Khan, Rajanpur) Sindh (Hyderabad, Jacobabad, Kamber Shadad kot, Kashmore, Sukkur), KPK (Charsada, Nowshera, Hairpur, Mardan, Peshawar) and Balochistan (Jaffarabad, Naseerabad), each of the Teams completed 29 Questionnaires (HH: 14, Men: 14,

Community: 01) daily, and conducted 02 FGDs and 02 IDIs. Response Rate for HH was 99.6% and for men it has been 98% whereas FGDs and IDIs yielded the response rate of 100%.

The BLS findings indicate that the rural communities in all the surveyed Districts, especially Balochistan, have pathetic conditions in relation to WASH. In Balochistan, except for some households with hand pumps, majority (87%) of people did not have access to the safe drinking water and thus required to consume water from canals and rivers. Most of the people in the surveyed communities have to fetch water from outside their homes (59%) and many have no proper utensils for water transportation (70%) and protected storage (51%). Water drainage system is not in place for three-fourths (75%) and therefore, waste water flows from households into streets or open fields providing ample opportunity for mosquitoes and flies to freely breed. Most of the people (56%) knew about water born diseases and suffered from one or the other during last 6-months (53%) and many of them did not relate it with open defecation (46%) but with bad sanitation of their villages. Further, due to flood damages and poverty, majority of people cannot afford to construct toilets within their house and thus constrained to practice open defecation (47%) although they, especially women are very much dissatisfied with it. Most of the schools also do not have a functional toilet for children and they also have to go for open defecation. The houses and schools with toilets usually either do not have hand washing facilities (44% and 36%, respectively) or have water only for washing hands (32% and 86%, respectively). Around one-third people, especially women and children do not wear shoes, primarily due to poverty/ un-affordability; this behavior exposes them to come in contact with feces, garbage and polluted water more often and thus more vulnerable to communicable diseases. The BLS finds that people know about the relationship of stagnant water and mosquitoes/ flies but 77% of them do not take any measure to control them and keep on throwing households waste water and garbage into their streets and open fields. Regarding hygiene, the BLS indicates also that 60% of all the surveyed communities have perceived knowledge of hand washing technique and claimed to wash hands before taking food and cooking, after defecation and cleaning animal waste. Oral hygiene practices are also poor, especially among women (61%) and children (78%), but 40% use Miswak or tooth brush to clean their teeth. In water scarce areas, men take bath almost daily but women and children do not do so.

From findings of the BLS it is concluded that the communities living in the surveyed areas are in dire need of help from the Government particularly the Local Government and Public Health Engineering Department, and the Civil Society Organizations/ Donors. They need be helped by giving knowledge on healthy living as well as providing WASH facilities to meet their minimum human requirement of safe water for drinking, open defecation free environment and safety from disease and illness including water borne disease. Urgently reaching these communities becomes

more significant in view of the more recent heavy rains during 2011 that have worsen their living conditions and aggravated the available WASH facilities. However, at some places in Sindh, the stagnant rain waters may hamper the Plan RUSFAD Project activities also, but at majority of the sites there would be no problems.

The BLS recommends Plan International to launch an Advocacy Campaign to mobilize local political and administrative support and resources and a comprehensive Health Education & Promotion Campaign for the BSL surveyed communities to raise awareness on WASH related issues leading to attitudinal & behavioral change among them. Such a Campaign requires development of socio-culturally responsive IEC material and active engagement of media, healthcare providers, volunteers, local religious leaders and school authorities/ teachers. Plan may consider to establish Community Support Groups in the villages and deploy Mobile Teams to arrange public seminars in keeping with local norms and indigenous language for raising awareness on WASH concerns. Further, geographical mapping and need assessment may be carried out to provide WASH facilities such as:

- Installation of hand pumps in collaboration with local communities
- Construction of household toilets with hand washing facilities
- Construction of school toilets with hand washing facilities
- Pavement of streets and construction of drainage system in collaboration with local authorities/ municipality
- Proper collection and disposal of household wastes

Summary Table

Indicators	All	Gender		Region			
		Female	Male	Punjab	Sindh	KPK	Baloch istan
Communities/villages	323			95	95	95	38
Response rate	99.6			100.0	99.0	98.8	100.0
Population With no education	73.7			84.1	75.3	57.2	91.6
Net Attendance Ratio for age 5-9 years							
Male	34.2			24.1	31.7	62.8	4.2
Female	27.3			19.6	19.7	55.5	1.9
Total	31.2			22.0	26.6	59.6	3.3
Residence within same premises after flood	88.0			71.7	99.2	88.4	98.8
Water							
HH with Improved source of drinking water	78.7	78.7	78.0	98.1	95.8	68.2	13.0
Drain/pond near source of drinking water	12.5	--	--	6.3	10.0	4.0	54.9
Water clean and sweet/tasteless	67.1	--	--	60.8	76.8	88.3	5.7
HH fetching water from outside home	39.0	--	--	18.3	44.5	31.5	95.3
Distance to the source of drinking water	0.6	0.5	0.8	0.2	1.0	0.4	0.7
Separate storage facility for drinking water in the HH	54.6	52.4	56.8	25.3	65.9	76.9	44.9
Water treatment practices to make it safer	4.5	--	--	2.1	3.9	8.5	2.1
Sanitation							
Availability of currenlty functional latrines in the HH	47.2	87.6	32.5	24.2	38.1	78.5	12.6
Improved Toilet facility presently used in the HH	26.0	--	--	18.3	19.6	51.2	5.3
Households presently practicing Open defecation	64.2	--	--	81.5	72.8	25.7	94.3
Source of construction of present latrine							
Self	86.6	--	--	85.3	77.8	92.1	23.3
NGO/village based organisation	8.5	--	--	11.8	17.7	3.1	46.7
Functional hand-washing facility inside/near by toilet	8.8	--	--	4.4	2.0	23.4	0.4
Satisfied by the place where family defecates at present	26.7	--	--	13.4	15.7	60.2	4.5
Hazard of Open defecation (replied by those practicing open defecation)	58.5	--	--	52.8	68.9	61.4	48.8
Intend to build latrine within next 6-months	39.9	--	--	47.1	43.6	38.9	16.9
Main Reason for no intention to build latrine: No money	35.9	--	--	43.3	33.1	17.9	68.7
Willingness to contribute, if offered to construct a new latrine							
Physically	70.2	--	--	60.1	93.6	46.7	95.1
Financially	31.1	--	--	22.7	55.3	26.3	3.8

Indicators	All	Gender		Region			
		Female	Male	Punjab	Sindh	KPK	Baloch istan
Disposal of animal excreta							
Agriculture use	35.4	--	--	30.3	16.6	76.0	3.4
Burn	45.5	--	--	38.4	64.6	10.5	93.9
Sanitary condition of streets							
Open drainage	33.1	--	--	16.4	21.5	67.8	17.9
HH usually drain out in open space/field/street	88.4	--	--	95.9	97.8	67.2	98.7
Adopt measures against mosquitoes							
No measures	73.9	--	--	76.3	69.5	68.2	93.4
Children using school's latrine	71.7	--	--	59.4	58.0	89.8	15.8
No latrine facility in the schools	15.4	--	--	13.1	25.4	5.8	68.4
Hand washing facility available in the school's toilet	67.7	--	--	41.8	52.2	86.9	4.2
Only water available for hand washing in the school's toilet, reported those who sent children to the school	49.8	--	--	24.4	29.7	76.3	1.3
Hygiene							
Hand washing practices							
Before eating:							
Men	75.0	--	--	53.0	84.0	89.0	76
Women	74.5	--	--	53.5	78.3	89.6	79.8
After defecation:							
Men	84.0	--	--	72.0	93.0	93.0	59.0
Women	85.2	--	--	71.2	94.4	93.6	76.4
Oral hygiene practices							
HH Women practicing miswak/tooth brush	48.7	--	--	35.3	67.8	51.8	26.2
Daily taking bath	97.0	97.1	96.8	97.9	97.9	94.1	99.2
Water Borne Diseases							
Common diseases reported in the area							
Diarrhea	67.8	64.4	71.1	44.3	77.3	77.4	78.9
Hepatitis/jaundice	55.4	51.4	59.4	37.0	71.2	44.0	89.3
Malaria/Dengue fever/fever	74.1	74.5	73.6	80.3	79.5	56.1	88.9
Knowledge about water-borne diseases	46.4	50.6	42.2	29.4	43.8	59.7	63.2
Any relationship between open defecation and diseases	47.3	44.0	50.6	42.1	41.9	54.0	57.3
Willing to participate activities/actions about WASH	48.5	66.5	30.4	33.1	57.8	52.3	54.6
Disease prevalence in the sampled area							
Sick during the last 6-months	75.3	74.7	75.8	79.0	71.6	67.2	98.4

Indicators	All	Gender		Region			
		Female	Male	Punjab	Sindh	KPK	Baloch istan
Average spending on health care during last 6-months	28408	--	--	10789	40673	29734	26422
Media as Source of Information on WASH							
Ever received any information on WASH	17.7	19.6	15.9	7.8	26.8	23.5	5.9
Most effected media sources reported							
Television	29.5	29.6	29.5	28.3	38.5	29.1	10.9
Radio	7.2	4.7	9.7	6.0	6.7	11.5	1.1
Ever attended meeting on WASH	11.5	12.7	10.2	3.8	16.2	16.2	7.1
Meeting on WASH arranged by:							
NGO/CBO/Village based organisation	75.1	67.3	86.6	45.1	84.5	82.3	66.7

Section 1

INTRODUCTION

SECTION 1

INTRODUCTION

Summary:

During July-August 2010, monsoon rains brought the worst flooding in past 80 years in Pakistan. The flood caused widespread devastation and chaos; in 82 Districts, over 20, 250,000 people (including 10,000, 000 children) were affected in all the Provinces, i.e. Punjab, Sindh, KPK, Balochistan, GB, and AJK. A large number of people became homeless and displaced, and livestock, houses and the communication infrastructure, were washed away. Further, according to Pakistan's Flood Emergency Plan launched on September 18, 2010, there were 13, 300,000 people in need of safe drinking water and basic sanitary assistance. However, the needs of the affected communities differed significantly because of geography and degree of pre-existing socio-economic vulnerability.

Therefore, in the wake of Post-Flood Reconstruction and in keeping with the National Sanitation Policy (2006) of Pakistan, Plan Pakistan has envisaged 'Rural Sanitation in Flood Affected Districts (RUSFAD: Phase-III) Project' aiming at 'Building back Better'.

This Section of the WASH KAP Baseline Survey (BLS) Report describes the background of the RUSFAD Project and the rationale for the BLS along-with its objectives, scope & design and institutional framework for undertaking the task. The Section indicates also the geographical coverage of the BLS and provides profiles of the Project Districts.

1.1 Background:

During July-August 2010, monsoon rains caused the worst flooding in past 80 years in Pakistan. Flooding started on July 22, 2010 after a few hours of rainfall in Balochistan when a dam burst 43 Km upstream of the city of Sibi and water from the Kech Kaur River inundated more than 20 villages along its banks. Later, the second spell caused havoc across the Khyber Pakhtunkhwa when the downpour reached some 900 mm in a matter of few hours before flowing south into Punjab and Sindh.

The floods caused widespread devastation and chaos with human lives and infrastructure in all the four Provinces of Pakistan. In 82 Districts, more than 20, 250,000 people (including 10,000, 000 children) were affected, with 10, 400,000 affected severely, in 12 Districts of Punjab, 19 in Sindh, 24 in KPK, 13 of Balochistan, 07 in GB and 07 in AJK. A large number of people became homeless and

displaced, livestock, houses, bridges, link roads and also the communication infrastructure had been washed away and shortages of food, water, clothing, shelter, and supplies made survival difficult for the unfortunate victims. Flashfloods and landslides uprooted thousands of acres of farmland also.

Non-availability of the safe drinking water coupled with bad sanitation and poor hygiene posed a high risk of water born diseases like diarrhea, cholera and malaria, aggravating the already compromised status of families, especially the children and pregnant & lactating mothers, and thus potentially resulting in to increased morbidity and mortality. According to Pakistan's Flood Emergency Plan (September 18, 2010), 13.3 Million people were in need of safe drinking water and basic sanitary assistance. However, the needs of the affected communities differ significantly because of geography and socioeconomic vulnerability.

Since before the 2010 Floods, Pakistan faced considerable challenges in achieving the Millennium Development Goals (MDGs) including MDG-7 (Ensure Environmental Sustainability) pertaining to sustainable access to safe drinking water and sanitation, and ranked 144 on the 2010 Human Development Index. Pre-flood data showed that in Pakistan, almost a quarter of all the <5 children suffered Global Acute Malnutrition (GAM) and in rural areas, 60% of people were without adequate sanitation facilities.

Considering the given situation as an opportunity to intervene for achieving total sanitation in a strategic manner during the immediate response and post-flood reconstruction, UNICEF prioritized the construction of emergency latrines, defecation trenches, sanitation facilities and provision of bathing cubicals during immediate response benefitting 1.5 Million people, and also supporting the installation and maintenance of hand washing facilities, de-sludging of sanitation facilities and community reconstruction of sanitation facilities in areas of return through provision of materials and cash incentives. Early recovery measures for returned families are focused on longer term sustainable sanitation interventions including behavior change interventions through social mobilization.

The National Sanitation Policy 2006 highlights social mobilization as a key component in addressing sanitation issues at the household level in the rural areas. The Policy envisions the creation of an 'open defecation free' (ODF) environment with safe disposal of liquid and solid waste and the promotion of health and hygiene practices. It provides also the broad guidelines and support to the Federal and Provincial Governments, Federally Administered Territories, Local Governments and Development Authorities, to enhance the sanitation coverage through the formulation of their

sanitation strategies, plans, programs and projects. The Policy aims to promote the Community Led Total Sanitation (CLTS) Approach and articulates a Total Sanitation Model.

In keeping with the National Sanitation Policy, efforts for total sanitation need to be incorporated right from beginning of post-flood reconstruction so as to harness the spirit of 'building back better' and this is the theme of the Project conceived by Plan with the Title 'Rural Sanitation in Flood Affected Districts (RUSFAD: Phase-III)'.

The primary objective of the RUSFAD Project is to reach out to 2,100,000 people (1,050,000 children <18, 462,000 women and 588,000 men) in nineteen flood affected Districts to protect them from water, sanitation & hygiene (WASH) related diseases. Further, the Project includes capacity building training on the Community Led Total Sanitation (CLTS) for Government officials and Community Resource Persons/ Community Activists. Therefore, a KAP Baseline Survey (BLS) was needed before launch of the RUSFAD Project by the Plan.

1.2 Objective of the Baseline Survey:

Primary objective of the BLS was to assess the gravity of WASH issues on basis of the information collected from the target communities and analyzed to determine their Knowledge, Attitude and Practices (KAP) regarding WASH with special focus on sanitation coverage and open defecation status ensuring that the data depicts the real scenario in the flood affected areas of RUSFAD Project Districts.

With the given objective, the WASH KAP BLS collected data on basic sanitation, open defecation practices, latrine use, safe drinking water, water born diseases, hand washing practices, hygiene related diseases, and socioeconomic status of the targeted rural flood affected communities with a particular focus on sample households.

1.3 Institutional Framework:

The Plan International-Pakistan provided funds and the National Trust for Population Welfare (NATPOW) executed the WASH KAP Baseline Survey in the selected 17 Flood affected Districts of Pakistan along-with the National Institute of Population Studies (NIPS) and the local community-based Affiliated Civil Society Organizations (CSOs) and Field Teams as the Implementing Partners (IPs).

A Project Coordination Unit (PCU) headed by the Principal Investigator (Dr. Nasser Mohiuddin), at the NATPOW Islamabad and Project Implementation Unit (PIU), headed by the Co-Principal Investigator (Mr. Faateh ud din Ahmad), at NIPS Islamabad, were established to undertake the BLS activities. NATPOW was responsible for overall execution including Donor liaison, external &

internal coordination, selection of Partner CSOs, data collection, financial disbursements & controls whereas NIPS was primarily responsible for sampling, quality control, software selection, data editing, entry and processing, Development of the Survey Tools, Training of enumerators, field M&E and Report Writing were the joint responsibilities of the experts from NATPOW and NIPS. A total of 15 CSOs, all NATPOW affiliates, were taken on board to engage 17 Men +17 Women enumerators for attending Training Workshop on Survey Tools at Islamabad and subsequently undertake fieldwork of the BLS. The CSOs were responsible for providing logistic support to the enumerators and also supervise them for their timing and attendance in the field.

A Steering Committee chaired by the Chief Executive NATPOW (Mr. Iftikhar Durrani) and Co-Chaired by the Director (Research & Survey) NIPS (Mr. Amanullah Bhatti), was constituted to oversee the progress and provide guidance, administrative support and facilitation during the Survey, and Senator Suriya Amiruddin, Chairperson NATPOW, also remained closely attached with the Steering Committee and the Core Team to prop up the process. The Technical Advisory role for the BLS and its Report was assumed by Mr. Imran Yusuf Shami, Project Support Manager (Implementation), Dr. Islam ul Haq, Project Manager-WASH, and Mr. Muhammad Nasir, MER Coordinator from the Plan International, to guide and buttress at various stages of the Project.

1.4 Scope of the Baseline Survey:

Plan International entrusted the NATPOW-NIPS to carry out the WASH KAP Baseline Survey with the following Scope of Work:

- Review of the Project Documents, Inception Mission and conduct Meetings with the relevant Plan Staff at Country Office
- Preparation of Tools for the KAP Baseline (Survey/ Sampling Methodology and Checklists, Questionnaires, Guidelines, Data Entry & Analysis Tools, etc.)
- Pre-testing of the Questionnaires & Tools and adjustments therein
- Training of Enumerators on Use of the Survey Tools
- Data Collection, Cleaning and Analysis
- Submission of Draft KAP BLS Report
- Validation Workshop with the Key Stakeholders
- Submission of Final KAP BLS Report

1.5 Survey Design and Survey Methodology:

Plan Pakistan signed an Agreement jointly with the Consultant Organizations, i.e. NATPOW and the NIPS, and assigned the task of undertaking WASH KAP Baseline Survey in the selected 17 Districts of Punjab (05), Sindh (05), KPK (05) and Balochistan (02), affected by Floods during 2010.

The work started with series of detailed meetings between Plan, NATPOW and NIPS to elaborate Survey Design, Survey Sample, Survey Tools and Methodology, etc.

Following the Agreement, the NATPOW short-listed and selected 15 of its Affiliated Civil Society Organizations (CSOs) based upon the criteria of having adequate administrative setups, technical expertise and financial control mechanisms to carry out the BLS related field activities. The CSOs identified candidates for enumerations, 02-Men & 02-Women, both with minimum qualification as Graduate who could speak local languages and were ready to perform fieldwork. Out of the identified candidates, enumerators (1-Male & 1-Female) were short-listed by NATPOW to form Interview Teams in the selected 17 Districts.

Technical Team comprising of subject specialists and researchers from NATPOW and NIPS undertook extensive literature review (Bibliography at Page:113) and exercising the mixed approach, developed Survey Tools consisting of Questionnaires for Households, Men and Community, and Guidelines for conducting Focus Group Discussions (FGDs) and In-Depth Interviews (IDIs). All of the BLS Tools were shared with Plan Pakistan and in keeping with their feedback, modified to undertake pre-testing in the field. Pre-testing was carried out in Golra Village of Islamabad and as per field response, amendments were made and thus finalized BLS Tools were sent to Plan and their concurrence was sought (The approved BLS Tools are given in the Annexure).

All the 34 enumerators from Punjab (10), Sindh (10), KPK (10) and Balochistan (04) were called at Islamabad to attend 03-Days Comprehensive Training Workshop, jointly conducted by WASH experts and researchers from NATPOW and NIPS. The Comprehensive Training Workshop comprised of class room lectures, power point presentations, role plays and group works to impart a holistic understanding of the WASH concepts and the Survey Tools. Field visit at Saidpur Village in Islamabad, for hands-on practice to complete the questionnaires was an integral component of the Comprehensive Training Workshop. The combined training of all the enumerators coupled with its well crafted design ensured uniformity and equal level of understanding & competency among the participants.

Fieldwork was started from early-August, 2011 and continued till early-October, 2011. Every Interview Team had to complete 29 Questionnaires (Household: 14, Men: 14, Community: 01) daily and conduct 02 FGDs and 02 IDIs during the course of fieldwork. It was certainly a tedious task given the hot weather, especially in Sindh and KPK, further made difficult by rains, bad law & order situations especially in Sindh, and fasting days of the month of Ramadan. Howsoever, with all the hardships, the Interview Teams did a marvelous job made possible with continuous encouragement and facilitation by the local CSOs, PCU at NATPOW and PIU at NIPS.

04 Quality Control Teams were raised from NIPS and later 02 added on behalf of NATPOW, to personally visit each of the Interview Teams at Punjab, Sindh, KPK and Balochistan during their fieldwork in the rural communities of the flood affected Districts and provide technical & supportive supervision. Timing of the visits of the Quality Control Teams was such that they reached the enumerators in beginning of the fieldwork so that their faults could be rectified right in the start and thus worth of the data collection was ensured. Co-Principal Investigator has continuously been busy to telephonically guide the Interview Teams as and when they felt any difficulty and required help. NATPOW assigned 03 Field Coordinators also.

Senior Officers from NATPOW Islamabad, NIPS Islamabad, and NATPOW Regional Offices at Karachi, Peshawar and Multan, also carried out M&E of the fieldwork at most of the Project sites in Punjab, Sindh, KPK and Balochistan. During these visits, Partner CSOs were also involved to undertake joint M&E and provide them guidance in furtherance to the technical & supportive supervision of the Interview Teams. Extensive field M&E has especially been carried out by the Principal Investigator and the Co-Principal Investigator in spite of the hot weather and rains.

Data cleaning, editing and entry by the efficient and smart Editors and Data Entry Operators at the NIPS PIU were concurrently at work. As it will be further elaborated in the Section 2, double-entry system was adopted to minimize error and guarantee credibility of the information. The laborious task was accomplished by a very competent Team comprising of 04 Editors, Data Entry Supervisor and 06 Data Entry Operators. NATPOW PCU continuously chased the CSOs and the individual Interview Team members to ensure un-interrupted flow of data from the field.

Arranging data and Tabulation has been done by the Co-Principal Investigator and his Team at NIPS PIU with constant guidance from the Principal Investigator, to bring the data in a meaningful form. Further, the Qualitative Data obtained through 34 FGDs and 34 IDIs was processed by the experienced Researchers at NATPOW PCU in collaboration with the Researchers at NIPS.

For preparation of the BLS Report, the Principal Investigator has been at the lead role, closely assisted by the Co-Principal Investigator and Researchers from NATPOW and NIPS. Draft Report was shared with Plan International and presented in a Validation Workshop with the key stakeholder and amended in line with their valuable feedback to develop the given Final WASH KAP BLS Report.

Technical Advisory role in the form of continued technical guidance from Plan International-Pakistan, especially Mr. Imran Yusuf Shami, Project Support Manager (Implementation), Dr. Islam ul Haq, Project Manager-WASH, and cooperation & support from Mr. Muhammad Nasir, MER Coordinator, has been an overwhelming source of inspiration throughout the course of the Project

and similarly, facilitation by the Project Steering Committee of Institutional Heads from NATPOW and NIPS, has made this venture a success story for both the Organizations.

1.6 Ethical Considerations:

In keeping with the internationally accepted rules of conducting a survey, all the ethical consideration were observed by all the concerned. As a matter of principle, informed consent was solicited from all the respondents by informing them the purpose of the BLS and telling that their participation was voluntary and the data collected will be used for making policies and program interventions. Also, the scope of BLS and tools were explained and they were informed about the approximate length of time required. The audio and visual privacy of respondent was well maintained and ensured, and all the information collected is kept confidential and processing codes were given to the questionnaires.

1.7 Geographical Spread of the Baseline Survey:

Province-wise names of the 17 Flood Affected Districts selected by the Plan International for conducting the WASH KAP BLS (RUSFAD: Phase-III) are enlisted as follows:

Punjab Districts (05):

- Multan
- Bahawalpur
- Muzzaffargarh
- Rajan Pur
- Rahim Yar Khan (RY Khan)

Sindh Districts (05):

- Hyderabad
- Sukkur
- Kashmore
- Kamber Shah Dad Kot
- Jacobabad

KPK Districts (05):

- Peshawar
- Haripur
- Nowshera
- Charsada
- Mardan

Balochistan Districts (02):

- Jaffarabad
- Naseerabad

TOTAL: 17 Districts In Pakistan

1.8 District Profiles:

The information provided here is based on the Censes Report-1998 and encompasses area of the Districts, rural and urban population division (in percent), annual growth rates, density per sq km, age of female 15-49 (in percent), proportion of <15 years population, female average age at marriage, male and female literacy (in percent), drinking water availability (in percent), electricity, number of hospitals, population per doctor, dispensary, rural health centers, basic health units, mother and child health centers and boys and girls number of primary and middle schools etc. Profile of the BLS Districts (17) is provided in the Table at end of this Section.

1.9 Report Architecture:

The WASH KAP Baseline Survey Report has been crafted in a very comprehensive manner to elucidate the processes, findings & results and conclusions & recommendations, to set benchmarks for important indicators that would help futuristically strategic planning for the 'Rural Sanitation in Flood Affected Districts (RUSFAD: Phase-III) Project', its subsequent execution & implementation by the Plan International and its Implementing Partners (IPs), and also Impact Assessment at the end of the Project.

The WASH KAP BLS Report consists of 04 Sections:

Section 1: Introduction

It describes background of the RUSFAD Project & rationale for the BLS along-with its objectives, scope & design and institutional framework for undertaking the task. The Section indicates also the geographical spread of the BLS and provides detailed profiles of the Project District.

Section 2: Material and Methodology

This Section gives a comprehensive overview of the inception & preparatory phase and fieldwork phase followed by detailed account of the database processing procedures.

Section 3: Findings & Results

This the main Section of the Report and it provides significant information gathered through the fieldwork and sorted out thematically into six Chapters as follows:

- Chapter-3.1: Population Characteristics
- Chapter-3.2: Water
- Chapter-3.3: Sanitation
- Chapter-3.4: Hygiene
- Chapter-3.5: Community
- Chapter-3.6: Focus Group Discussions (FGDs) and In-Depth Interviews (IDIs)

Section-4: Conclusions and Recommendations

In this Section the BLS findings have been discussed to draw upon concrete conclusions which provide basis for putting up some recommendations for consideration by the decision-making authorities while planning, executing & implementing and measuring the progress of RUSFAD Project

At the end, List of Contributors, Additional Tables, the Survey Tools and some selected pictures have also been added to complement the Report.

1.10 Issues & Challenges:

During the inception and mobilization phase of the WASH KAP BLS, couple of issues & challenges emerged time to time but with strong determination and dedication of all the concerned, the Project has been successfully accomplished. Some of the major issues & challenges have been enlisted as under:

- Difficulty in selection of local Partner CSOs in all the 17 Districts to facilitate BLS
- Delays in mobilization of Interview Teams to undertake Fieldwork
- Difficulties/ Delays in Fieldwork due to different unavoidable circumstances & reasons such as hot weather, rains, bad law & order situations and fasting in Ramadan
- Delay in release of Funds from Plan International
- Inconsistent performance of different enumerators causing difficulty in data processing
- Difficulties in communication and coordination with field Implementing Partners due to technology faults and electricity failures
- Delays in postage of Questionnaire Clusters from the field to Islamabad
- Difficulties in financial disbursements due to scarcity of Banking services in rural areas

Table A

District Profile: Selected Indicators

S.no	Indicators	Punjab (2010)					SINDH (2010)			Khyber Pakhtunkhwa (2010)					Baloshistan (2010)	
		Bahawalpur	Multan	RYK	Rajan pur	M'Garh	Hyderabad	Jacobabad	Sukkur	Charsada	Haripur	Mardan	Nowshera	Peshawar	Jaffarabad	Nasirabad
1	Area (sq. km)	24830	3720	11880	5519	8449	5519	5278	5165	996 *	1725	1632	1748	1257	2445	3387
2	Population (000)	3041.27	3896	3926.3	1399	3295	3666.3	1807	1151.62	1333.13	903	1904.04	1140.12	2632.6	572.53	325.2
3	Rural Population (000)	2085.6	1947.2	2895.9	1106.3	2751	1513.6	1294	450.7	995.4	756.3	1401	787.2	1183.8	438.21	255.2
4	Urban Population (000)	955.67	1948.76	1030.48	273.19	544	2152.7	514	700.91	337.73	146.69	503.08	352.88	1448.8	134.38	69.98
5	Annual Pop. Growth Rate (%)	3.07 *	2.7 *	3.2 *	3.3 *	3.4 *	2.02 *	2.04 *	2.88 *	2.9 *	2.2 *	3.01 *	2.9 *	3.56 *	2.92 *	3.86
6	Density (persons/sq.km)	122.48369	1047.3118	330.49663	253.48795	389.98698	664.30513	342.36453	222.96612	1338.48	523.47826	1166.6912	652.24256	2094.3516	234.1636	96.014172
7	Female Age 15-49 (%)	45.19	46.1	44.19	42.23	42.39	48.33	47.13	46.5	43.81	47.44	43.99	45.65	45.04	47.03	47.4
8	<15 Years Population (Proportion)	44.4	43.6	46.1	47.6	48.39	42.2	46.3	44	46.9	41.8	47.1	44.7	46.1	44.7	44.56
9	Singulate Mean Age At Marriage	21.09 *	21.6 *	20.9 *	19.4 *	19.5 *	21.88 *	17.92 *	20.46 *	21.55 *	22.5 *	21.06 *	20.53 *	21.3 *	18.5 *	18.1 *
10	Female Literacy (%) - Lit.Ratio	24 *	32.3 *	21.8 *	11.3 *	14.8 *	34.97 *	12.3 *	31.22 *	14.1 *	37.4 *	18.38 *	22.7 *	25.85 *	8.64 *	5.06 *
11	Male Literacy (%) - Lit.Ratio	44.9 *	53.3 *	43.4 *	29 *	40.9 *	52.63 *	34.08 *	59.83 *	46.9 *	70.5 *	53.5 *	60.6 *	55.97 *	27.5 *	19.51 *
12	Availability of Drinking Water (%)	80.6 **	92.5 **	84.9 **	73.5 **	93.7 *	73.65 **	75.28 **	78.24 **	86.4 **	55.2 **	78.75 **	74.4 **	84.17 **	30.83 **	20.64 **
13	Electricity (%)	50 *	70 *	53 *	40 *	51 *	73 *	64 *	73.51 *	90.5 *	76 *	83.53 *	90.5 *	95 *	65 *	60 *
14	No. of Hospitals	15	17	10	15	11	12	9	10	11	10	8	10	28	4	6
15	Population/Doctor	xxxxxx	xxxxxx	xxxxxx	xxxxxxx	14308[D]	6812[C]	8732[C]	4573[C]	17817[D]	14626[F]	11826	10015[F]	1693[F]	11929 ****	4253 ****
16	No. of Dispensary	78	46 ***	86	19 ***	37[F]	12[F]	8[F]	32	10	30	23	16[F]	85	49	70
17	No. of Rural Health Centers	19	10	24	19	15	15	8	25	4	50	7	10	3[D]	1	8
18	No. of Basic Health Units	76	89	121	76	88	81	39	12	50	55	65	8	58	30	45
19	No. of MCH Centers	19	41	16	19	6	6	8	9	5	10	8	4	25	5	14
20	No. of Primary Schools for Boys	931[E]	490 ***	1132 ***	536 ***	736[D]	2541[E]	2234[E]	864E	592	668 ***	741 ****	427 ****	633 ***	577 ***	259 ***
21	No. of Primary Schools for Girls	768[E]	791 ***	1266 ***	416 ***	792[D]	627[E]	427[E]	187E	393	286 ***	529 ****	314 ****	405 ***	243 ***	128 ***
22	No. of Middle Schools for Boys	86[E]	79 ***	xxxx	38 ***	71[D]	130[E]	79[E]	40E	56	64 ***	74 ****	51 ****	86 ***	27 ***	15 ***
23	No. of Middle Schools for Girls	139[E]	106 ***	xxxx	27 ***	70[D]	45[E]	36[E]	23E	41	46 ***	63 ****	29 ****	54 ***	9 ***	3 ***

* Information for two Districts of Sindh (Kamber Shahdad Kot and Kashmore) is not available but is to be documented in next Census.

Section 2

MATERIALS & METHODOLOGY

SECTION 2

MATERIALS AND METHODOLOGY

Summary:

Scope of the BLS included review of the Project documents, meetings with the relevant Plan Staff at Country Office, preparation and pretesting of Survey Tools, Training of enumerators on use of the Survey Tools, data collection, cleaning and analysis, and submission of a draft and then a final WASH KAP BLS Report.

Institutional Framework for the BLS comprised of the Plan International-Pakistan for providing funds and the National Trust for Population Welfare (NATPOW) executed the WASH KAP Baseline Survey in the selected 17 Flood affected Districts of Pakistan along-with the National Institute of Population Studies (NIPS) and the local community-based NATPOW Affiliated Civil Society Organizations (CSOs) and Field Teams as the Implementing Partners (IPs).

Finalization of BLS Tools (Questionnaires for Households, Men and Community, and Guidelines for conducting Focus Group Discussions (FGDs) and In-Depth Interviews (IDIs) was followed by 03-Days Comprehensive Training Workshop of all the 17 male and 17 female enumerators from Punjab (10), Sindh (10), KPK (10) and Balochistan (04) was jointly conducted by WASH experts and researchers from NATPOW and NIPS at Islamabad.

A total of 323 villages and 4515households were selected. Thus, during fieldwork, each of 17 Teams in 17 Districts of Punjab (Multan, Bhawalpur, Muzzaffargarh, Rajan Pur, Rahim Yar Khan), Sindh (Hyderabad, Sukkur, Kashmore, Kamber Shah Dad Kot, Jacobabad), KPK (Peshawar, Haripur, Nowshera, Charsada, Mardan) and Balochistan (Jaffarabad, Naseerabad), had to complete 29 Questionnaires (Household: 14, Men: 14, Community: 01) daily and conduct 02 FGDs and 02 IDIs. Of the targeted 4515 HH, 4495 HH/women were successfully interviewed yielding a response rate of 99.6 percent in the selected 17 Districts. The meager non response was due to women who were not present despite repeated visits to their households. Out of 4495 households, 4436 men were successfully interviewed with a response rate of 98.7 percent. For FGDs and IDIs, the response rate has been 100%.

2.1 Inception and Preparatory Phase:

2.1.1 Study Population:

The focus of the study was to conduct a district level household observational survey using both the qualitative as well as quantitative techniques. The study domain comprised of total 17-Districts: in Punjab-05, Sindh-05, KPK-05 and Balochistan-02.

Two-stage cluster sampling technique was employed to get representative sample. Research tools adopted were two modules for the households (HH) and eligible men and a community questionnaire and guidelines for conducting Focus Group Discussions and In-Depth Interviews. The fieldwork was carried out to collect relevant information which was analyzed to prepare the BLS Report.

2.1.2 Sample Design:

The sample is designed to provide reliable estimates for a variety of WASH variables for various domains of interest. A sample of 4515 households was drawn to provide reliable estimates of WASH indicators of 17 Districts. A two-stage stratified random sampling design was used; in the first stage, 323 flood affected villages were randomly selected out of a list provided by Plan Pakistan where they would be undertaking RUSFAD Project (Phase: III) interventions. Selection of the 323 villages was made with probability proportional to size among all the 17 Districts to ensure the representation of each district. In the second stage, 14 households from each of the sampled 323 villages were selected through systemic random technique.

2.1.3 Survey/ Research Tools:

The quantitative as well as qualitative research tools are adopted in this Study using structured Questionnaires, FGDs and IDIs Guidelines (Research Tools have been annexed at end of the Report).

A working committee comprised of professionals from NIPS and NATPOW observed, discussed and developed the Questionnaires, FGDs Guidelines and IDIs Guidelines, and also translated in to Urdu. The Survey Tools were sent to Plan Pakistan where these were examined in detail for providing feedback and discussed in a meeting before approval. Plan approved the Tools and recommended to launch the Survey.

To assess the knowledge, attitude and practices among women and men , and also to cross validate the data so collected during the BLS, similar questions were used where necessary. Three types of Questionnaires, one for each module, were developed as described below:-

Module-I: Household (HH) Questionnaire

The Questionnaire was meant for the adult women residing in the HH and it comprised of Household Roster (brief profile of HH members); Household Characteristics; HH possessions and

HH facilities; KAP about Safe Drinking Water, Sanitation and Hygiene; Observatory Information on WASH and Water borne diseases.

Module-II: Men Questionnaire

The eligible men from the HH were identified and interviewed mainly for KAP about Safe Drinking Water, Sanitation and Hygiene, and Water borne diseases.

Module-III: Community Questionnaire

The Community Questionnaire, a brief Form that was filled out for each sample point in the study areas, included questions about the availability of various kinds of health facilities and services, water and sanitation and information on the availability of transportation, education, and communication facilities. Against the 323 targeted, 321 Community Questionnaires have been filled to collect information on background characteristics of the respondents; general information about the community; KAP on water, sanitation and hygiene; schools sanitation conditions, and attributes of an ideal village.

IDIs Guidelines

The primary advantage of in-depth interviews is that it is a very effective tool for collecting sensitive and personal information; therefore, 34 IDIs were conducted with 17 men and 17 women to understand their knowledge, attitude and practices towards WASH and also the information on respondents characteristics; rain water, storage, purification; water borne diseases; disposal of domestic waste, etc.

FGDs Guidelines

The complete information could not be attained only from individual perspective through IDIs and structured Questionnaires, thus to get community view 34 FDGs were organized 17 for men and 17 for women to collect information on KAP about WASH issues, Water borne diseases, etc.

2.2 Fieldwork Phase:

2.2.1 Selection of Partner CSOs:

Selection of the local community-based CSOs as Implementing Partners (IPs) in the rural fraction of the identified flood affected Districts was a critical step toward ultimate success of the WASH KAP BLS. NATPOW PCU at Head Office, Islamabad, accomplished this exercise in consultation with the NATPOW Regional Offices at Multan-Punjab, Karachi-Sindh, Peshawar-KPK and Quetta-Balochistan. Thus, after detailed scrutiny of their history & records, the NATPOW PCU short-listed and selected 15 of its affiliated CSOs, based upon the criteria of having adequate administrative setups, technical expertise and financial control mechanisms, to carry out the BLS related field activities.

During monitoring visits of the Senior Officers from NATPOW Islamabad, NIPS Islamabad and NATPOW Regional Offices at Multan, Karachi Peshawar and Quetta, the Partner CSOs were also involved to undertake joint M&E at most of the Project sites. During these visits, the CSOs were capacitated for technical & supportive supervision of the Interview Teams.

Names of the CSOs incorporated and Field Teams/ Enumerators as IPs involved in the KAP BLS fieldwork have been given after Section 4 in this Report.

2.2.2 Training of Field Staff:

All the 34 enumerators from Punjab (10), Sindh (10), KPK (10) and Balochistan (04) were called at Islamabad to attend 03-Days Comprehensive Training Workshop, jointly conducted by WASH experts and researchers from NATPOW and NIPS during July 14-16, 2011. Opening Session was chaired by the Chief Executive Officer NATPOW (Mr. Iftikhar Durrani) and co-chaired by the Director R&S, NIPS (Mr. Amanullah Bhatti) and proceedings started with recitation from the Holy Quran.

The First & Second half days of the Comprehensive Training Workshop comprised of class room lectures, power point presentations, role plays and group works to impart a holistic understanding of the WASH concepts and the Survey Tools, i.e. 3 Questionnaires, one each for interviewing HH women, men and community, FGDs Guidelines and IDIs Guidelines.

Along-with the enumerators, the Training was attended also by the Researchers from NATPOW and NIPS, NATPOW Regional Officers from Multan, Karachi and Peshawar, Quality Control Teams Members from NIPS, Officers from NATPOW PCU and NIPS PIU. The Principal Investigator (Dr. Nasser Mohiuddin) and the Co-Principal Investigator (Mr. Faateh ud Din) were the primary Trainers, whereas, the Researches (Ms. Noorus Sehar, Dr. Sumaida Anwar, Ms. Aysha Sheraz, Ms. Rabia Zafar and Ali Anwar Buriro) also conducted different sessions, especially the group work and role play sessions.

Glimpse from Comprehensive Training Workshop:

Theoretical Sessions & Discussions





In second half of the Second Day, all the enumerators, other participants and Trainer were driven to visit Saidpur Village in Islamabad, for hands-on practice in the field to fill-up the Questionnaires which constituted an integral component of the Comprehensive Training Workshop. Each of the enumerators filled-up at least one Questionnaire and conducted partial FGDs. They stayed there till evening and after return to hotel, given break and then sent out for sightseeing in Islamabad.

Hands-on Practice for Fieldwork




Field visit was followed by checking of the Questionnaires filled by each of the enumerators and others and subsequently group sessions were conducted to jointly discuss the mistakes and omissions noticed in the work and their rectification for ensuring the quality during actual fieldwork.

Feedback and Group Discussions




Closing Session & Certificate Distribution




Group Photo with Senator Suriya Amiruddin CP NATPOW and Mr. Haider W. Yaqub CD Plan

The Closing Session was chaired by Senator Suriya Amiruddin, Chairperson NATPOW, and co-chaired by Mr. Haider W. Yaqub, Former Country Director Plan Pakistan, and also graced by Mr. Amanullah Bhatti, Director NIPS, and Mr. Imran Yusuf Shami, Program Support Manager (Implementation) Plan Pakistan. Senator Suriya Amiruddin and Mr. Haider W. Yaqub emphasized significance of the information required through BLS and its utility for future RUSFAD Project aiming to provide better hygiene and sanitation facilities to the target communities with the theme of 'Building it Better' during reconstruction process after the floods 2010.

At end of the 03-Days Comprehensive Training Workshop, the enumerators and other participants and organizers were awarded certificates by Senator Suriya Amiruddin, Chairperson NATPOW, and Mr. Haider W. Yaqub, Country Director Plan International-Pakistan.

The combined training of all the enumerators coupled with its well crafted design ensured uniformity and equal level of understanding among the participants.

2.2.3 Field Work & Data Collection

Fieldwork of the BLS has been carried out in 17 selected Districts by 17 Teams, each comprising of one male and one female, trained through extensive 03-Days Comprehensive Training Workshop for data collection (Details of the Training have been described in the foregoing paragraphs). During Fieldwork, the NATPOW Partner CSOs were responsible for making necessary logistics arrangements; the male interviewers were mandated for the Men Questionnaire and Community Questionnaire while the female interviewers conducted HH interviews from women respondents. During data collection, access to the respondents was also facilitated by the NATPOW CSOs and

each team daily completed 29 Questionnaires i.e. 14 HH, 14 Men, and 01 Community Questionnaires. After completion of the Questionnaires, 02 IDIs and 02 FGDs were also conducted by each of the Teams in all the 17 Districts.

2.2.4 Data Quality Control Mechanisms

Four Quality Control Interviewers Teams were deputed to work with various Field Teams for 10 days to undertake several tasks: observe on-going interviews for delivery of questions, verify and validate information recorded by interviewers by revisiting and re-interviewing respondents, review completed interviews/questionnaires and provide on-the-job training for weaker field staff. The QC Teams edited also the completed questionnaires and reviewed any errors with the team members. Finally, they assisted the teams to resolve any problem. Their monitoring reports were shared with the team members and supervisors to maintain transparency and openness in the process. During the fieldwork, a set of quality control check tables for critical indicators was produced using the computerized data at NIPS. Problems that appeared from review of these tables were discussed with the relevant teams to ensure that the problems did not persist. Regular meetings of the core staff and field coordinators were held at NIPS and NATPOW to oversee the progress, performance, problems, solutions, and future strategies. These meetings helped resolving field problems and improving the quality of data collected from the field.

During the fieldwork, the weather was very hot and law & order situation was bad in Sindh. Few refusal cases were encountered by the interviewers too. Some of the areas came under flood again during 2011 due to which some of the sampled villages could not be located/ covered, therefore those villages were replaced by repeating the same selection process and with consent of the Plan Pakistan.

2.2.5 Field Monitoring and Supervision

Ensuring high-quality data was a prime concern during the survey and was ensured through regular supervision and monitoring of NIPS and NATPOW Teams during fieldwork. To ensure quality of the data, the field teams were regularly monitored and supervised. From the first week of data collection, Project Director (PD) NIPS, Principal Investigator (PI) and Co-Principal Investigator (Co-PI) undertook spot checking visits to assess CSOs facilitation and observe the performance of field research staff. The field monitoring was focused on supervision of questionnaire filling process and verification of the data collected by spot checks. Adherence to the identified sample population was also ensured during these field visits. Close communication was maintained at all times between the NATPOW, NIPS, field supervisors and interviewers during fieldwork. NATPOW Partner CSOs were also kept in the communication loop as they were responsible for logistics support and performance

of their teams. Team performance was judged by team cohesion and discipline, timely arrival at field area visits and revisits to households to complete all questionnaires and efficient use of time by team members. Five Field Coordinators from NATPOW also followed the field teams to support and facilitate them in filling the questionnaires, adhering to the sample, conducting interviews, editing the questionnaire, observing team coordination, ensuring efficient use of time and to assist the teams to resolve the problems. The filled questionnaires were returned from the field to NIPS/ NATPOW Headquarters in Islamabad. At NIPS, these were thoroughly reviewed and content verification and authentication of set criterion was carried out to confirm that the data was collected according to the rules. NIPS, NATPOW and Partner CSOs formed a system that ensured that the interviewing teams received necessary materials on a timely basis. NATPOW established a comprehensive system to ensure transfer of sufficient funds to CSOs and the Field Teams to cover the costs of operating vehicles, communications, and per diem payments to all team members.

2.2.6 Response Rate/ Data Coverage

The Table-1 presents the coverage of individual response rate. A total of 323 clusters and 4515 households were selected. Of the targeted 4515 HH, 4495 HH/women were successfully interviewed yielding a response rate of 99.6 percent in the selected 17 Districts. The meager non response was due to women who were not present despite repeated visits to their households. Out of 4495 households, 4436 men were successfully interviewed with a response rate of 98.7 percent.

Response rate varied across the provinces with 100 percent in Punjab, Sindh and Balochistan and around 99 percent for KPK respectively. While observing the district wise response rate it is deduced that Charsada (99.6 percent), Mardan (97 percent), Nowshera (94.3 percent) and Haripur (94 percent) response rates are little low as compared to other Districts having 100 percent response rate. Thus, on the whole the response rate is quite impressive showing efficiency of the teams and cooperation of the respondents (Details at Annexed Table 1).

Table-1: Response Rate of the Respondents by Regions

Region/Districts	Number of clusters	Sampled households	Interviewed households	Household response rate	Eligible men	Interviewed men	Men response rate	Men's overall response rate
Punjab	95	1327	1327	100.0	1327	1317	99.2	99.2
Sindh	95	1330	1328	100.0	1328	1326	99.8	99.8
KPK	95	532	1310	98.8	1310	1269	96.9	95.7
Balochistan	38	531	530	100.0	530	524	98.9	98.9

2.3 Data Processing and Editing Procedures:

2.3.1 Managing, Editing and Coding of Data,

Data processing started at the field-level through the checking of the Questionnaires. Teams were provided editing instructions and emphasis was placed on the importance of correct identification of eligible respondents (both women and men) and completing Questionnaires. Each of the Field Team Members performed on-the-spot cross checks and preliminary editing of the questionnaires during the enumeration period and the completed Questionnaires were returned regularly from the field to NIPS/ NATPOW. At NIPS, each of the received clusters (a bunch of 29 Questionnaires filled in one village) was kept as a whole and the Office Editors undertook their editing as per standardized instructions.

2.3.2 Data Entry and Verification

Data entry process was started shortly after commencement of the fieldwork; the Questionnaire were edited and entered by the Data Processing Teams specifically trained for the task at NIPS.

A detailed and comprehensive data entry application was developed in the CSPro software and checked and tested before entering the data. The data were entered by trained Data Entry Operators.

In order to ensure quality control, all questionnaires were double entered and internal consistency checks were performed. The verification was done by a different Data Entry Operator and in a different computer. After entering, data were compared to eliminate differences with checking against the Questionnaires.

2.3.3 Data Analysis

After completion of double data entry, elimination of differences from both data sets and data cleaning, the entire data set was transferred to SPSS (version: 13) for further data transformation and analysis. The main processes carried out before analysis included recoding of variables, transformation of new variables based on existing information and merging of two data sets (i.e. household and men). On basis of the final data file, preliminary tables were generated for Initial Report and later, detailed tabulation of the findings was carried out for the Final Report on the BLS.

Section 3

FINDINGS & RESULTS

SECTION 3

FINDINGS & RESULTS

Summary:

The BLS findings indicate that the rural communities in all the surveyed Districts, especially Balochistan, have pathetic conditions in relation to WASH. In Balochistan, except for some households with hand pumps, majority (87%) of people did not have access to the safe drinking water and thus required to consume water from canals and rivers. Most of the people in the surveyed communities have to fetch water from outside their homes (39%) and many have no proper utensils for water transportation (89%) and protected storage (39%). Water drainage system is not in place for three-fourths (72%) and therefore, waste water flows from households into streets or open fields providing ample opportunity for mosquitoes and flies to freely breed. Most of the people (51%) knew about water born diseases and suffered from one or the other during last 6-months (71%) and many of them did not relate it with open defecation (56%) but with bad sanitation of their villages. Further, due to flood damages and poverty, majority of people cannot afford to construct toilets within their house and thus constrained to practice open defecation (64%) although they, especially women are very much dissatisfied with it. Most of the schools also do not have a functional toilet for children and they also have to go for open defecation. Many of the houses and schools with toilets do not have hand washing facilities (36% and 32%, respectively). Around 44 percent people, especially women and children do not wear shoes, primarily due to poverty/ un-affordability; this behavior exposes them to come in contact with feces, garbage and polluted water more often and thus more vulnerable to communicable diseases. The BLS finds that people know about the relationship of stagnant water and mosquitoes/ flies but 74% of them do not take any measure to control them and keep on throwing households waste water and garbage into their streets and open fields. Regarding hygiene, the BLS indicates also that 43% of all the surveyed communities have perceived knowledge of hand washing technique and claimed to wash hands before taking food and cooking, after defecation and cleaning animal waste. Oral hygiene practices are also poor, especially among women (51%) and children (78%), but 49% use Miswak or tooth brush to clean their teeth. In water scarce areas, men take bath almost daily but women and children do not do so.

CHAPTER: 3-1

POPULATION CHATACTERISTICS

3.1.1 Background Characteristics of Household Population

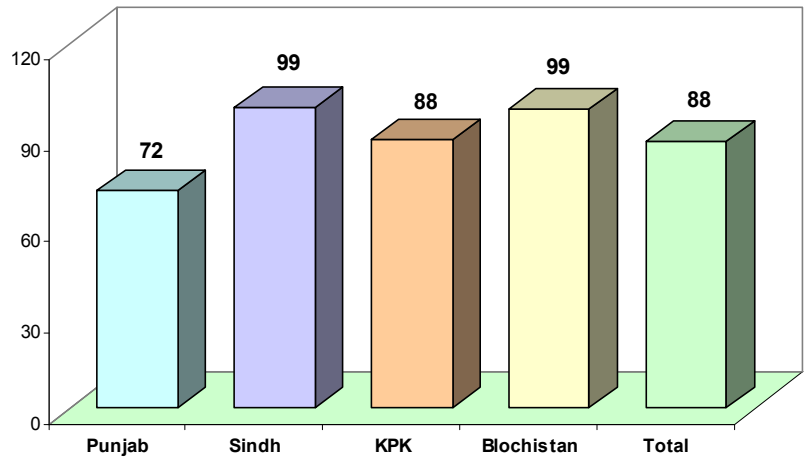
This part of the chapter provides basic information on demographic and socioeconomic characteristics of the household population. The socio-economic settings determine the life pattern of inhabitants in terms of attitude and perceptions towards a particular idea or event. In order to have a better understanding of the perceptions and attitudes of the household members for this BLS, it is equally important to know their background characteristics. To get the holistic information about the household population under study, detailed information was collected on age, sex, education, and economic status. The BLS target population lived in the flood affected areas and had varied socioeconomic characteristics which are of paramount importance for analysis of their behavioral and attitudinal trends. Socio-demographic background characteristics are also important for understanding its nexus with their attitudes and behaviors toward water sanitation and hygiene, which can be helpful in promoting change, especially in societies like Pakistan where resources for this purpose are limited. Survey provides information also on household facilities and assets, which is important for studying and identifying major indicators like the status of households as well as the characteristics associated with the population residing in the households.

In the given RUSFAD BLS, a household is defined as a person or group of related and unrelated persons who usually live together in the same dwelling unit(s) or in connected premises, who acknowledge one adult member as head of the household and have common arrangements for cooking and eating. Information on access to electricity, type of household, main material of the roof, walls and housing structure, sleeping space, and type of fuel used for cooking are physical characteristics of a household that are used to assess the general well being and socioeconomic status of household members.

Place of Residence Before and After Flood

Figure HH.1 displays that around nine out of ten people were living in the same household after flood as they were living before flood-2010. This clearly indicates their affiliations with their land and area. A slight variation has been observed across Regions except for Punjab; almost every household of Sindh and Balochistan (99 percent) returned back after flood in the Districts, followed by KPK (88 percent) while in the sampled Districts of Punjab 72 percent households had returned back till the time of Survey.

Figure HH.1: Residence within the Same Premises After Flood
Percent Distribution of Households by Place of Residence After Flood according to Regions



Household Size

It is observed that Pakistani households tend to be large with an average of six to seven persons living and eating together (NIPS, 2008). The Table HH.1 shows that the household in flood affected areas of all Regions have an average of 6 persons (6.2). The breakdown by Regions shows that KPK has the average household size of 7 followed by Sindh, Punjab and Balochistan where household size is 6. The given household size (6.2) includes 4.6 dependent members (non-earners) per HH.

Table HH.1: Household Size
Percent Distribution of all Households by household size, and mean size of household according to Regions

Number of person/HH		Punjab	Sindh	KPK	Balochistan	Total
2		5.7	6.9	3.0	8.3	5.6
3		9.9	8.4	5.4	10.6	8.2
4		14.0	14.0	9.5	16.0	12.9
5		15.5	13.7	15.3	15.5	14.9
6		17.9	15.1	17.1	13.0	16.3
7		13.9	10.4	15.2	10.4	12.8
8		10.1	9.3	13.3	9.8	10.8
9		7.5	9.0	9.0	8.7	8.5
10+		5.5	13.2	12.2	7.7	10.0
Total	Percent	100.0	100.0	100.0	100.0	100.0
	Number	1327	1328	1310	530	4495
Average persons in the household		5.8	6.2	6.6	5.8	6.2

Gender and Age of Household Population

Gender statistics presented in Table HH.2 indicate that out of 4495 households with population comprising of 27,685, around 7 percent variation is found in gender distribution of household i.e. 53.3 percent are male members and 46.7 percent are females. Whereas Region wise, there are variations like highest number (55 percent) of males are in Balochistan followed by KPK and Sindh (53 percent), and Punjab (52 percent).

Table HH.2: Household Population by Gender and Age
Percent Distribution of household population by Gender, Age and Region

Background characteristics		Punjab	Sindh	KPK	Balochistan	Total
Gender	Male	52.4	53.4	53.4	54.8	53.3
	Female	47.6	46.6	46.6	45.2	46.7
Member age	0 - 4	15.7	12.4	10.0	12.0	12.5
	5 - 9	18.5	16.7	13.4	15.1	16.0
	10 - 14	13.9	13.9	14.1	14.8	14.1
	15 - 19	10.2	10.4	12.4	12.0	11.2
	20 - 24	7.2	7.2	9.1	8.6	7.9
	25 - 29	7.3	8.0	7.6	8.5	7.7
	30 - 34	6.6	6.6	5.9	6.0	6.3
	35 - 39	6.0	5.8	5.6	7.4	6.0
	40 - 44	4.2	5.5	5.7	4.5	5.1
	45 – 49	3.1	3.9	4.0	4.0	3.7
	50 – 54	2.6	3.4	3.7	3.0	3.2
	55 – 59	1.3	1.9	1.9	1.2	1.6
	60 – 64	1.8	2.1	3.0	1.2	2.2
	65 and More	1.7	2.4	3.5	1.8	2.4
Total	Percent	100.0	100.0	100.0	100.0	100.0
	Number	7748	8231	8637	3069	27685

Like many developing countries, data collection in Pakistan is also subject to age misreporting and heaping on certain ages due to digit preference, i.e. it tends toward 0 and 5. Because of these limitations, special attention was paid in the survey to minimize age reporting errors. Interviewers were given training in the techniques of probing to elicit age information that is as accurate as possible. It can be seen from Table HH.3 that more than two-fifth (43 percent) of all the 27,685 household members are between 00-14 years reflecting young age population base and about one-fifth (19 percent) of population between 15–24 years indicates the youth. There is a gradual decline in the percentages as the age brackets exceed 45 and above. A slight variation in age pattern is reflected in all Regions as highest proportion of having population between 00 – 14 years observed in the Districts of Punjab (48 percent) and lowest in KPK (38 percent).

Educational Attainment of the Household Population

It is a well established fact that education plays an important role in community's development and progress. It redirects the attitudes and behaviors of the population towards improvement in the

quality of life. The education is argued to be one of the strongest and important predictors of socio economic and demographic behavior in Pakistan. It also plays an important role in changing overall behavior of the population. The Table HH.3 provides information on distribution of household members age 5 and above according to highest level of education by gender.

Table HH.3: Level of Education

Percentage distribution of HH Members age 5 & above for highest level of Education by Gender

Characteristics		No Education	Upto Primary	Upto Middle	Upto Secondary	Above Secondary	Total	
							Percent	Number
Male	5 - 9	74.7	25.1	.2			100.0	2384
	10 - 14	52.7	33.7	11.7	1.8		100.0	2137
	15 - 19	53.2	8.9	15.7	16.4	5.7	100.0	1691
	20 - 24	57.0	7.1	10.4	12.3	13.2	100.0	1178
	25 - 29	61.9	6.7	7.3	13.6	10.5	100.0	1100
	30 - 34	65.9	4.7	5.7	13.8	9.8	100.0	875
	35 - 39	73.1	4.9	4.2	9.5	8.2	100.0	777
	40 - 44	72.9	6.3	4.0	9.0	7.7	100.0	743
	45 - 49	74.3	7.1	3.4	8.4	6.9	100.0	536
	50 - 54	79.3	5.9	3.2	7.6	4.0	100.0	527
	55 - 59	75.8	6.5	4.3	9.1	4.3	100.0	231
	60 - 64	83.6	4.5	4.0	6.1	1.9	100.0	378
	65 and More	89.5	3.3	2.1	4.4	.7	100.0	427
	Total	65.7	14.4	7.0	7.9	5.0	100.0	12984
Female	5 - 9	80.3	19.6	.1			100.0	2033
	10 - 14	64.7	27.0	7.5	.7		100.0	1749
	15 - 19	72.7	8.9	9.1	6.6	2.7	100.0	1387
	20 - 24	79.0	6.4	4.2	5.1	5.3	100.0	1012
	25 - 29	86.9	4.1	2.7	4.0	2.2	100.0	1038
	30 - 34	90.7	2.5	1.8	2.4	2.5	100.0	868
	35 - 39	95.8	1.0	.9	1.3	1.0	100.0	873
	40 - 44	95.0	1.7	.8	1.7	.9	100.0	662
	45 - 49	98.3	.8		.8		100.0	481
	50 - 54	97.5	1.1	.3	.5	.5	100.0	367
	55 - 59	97.7	.5	.5	.5	.9	100.0	220
	60 - 64	98.7		.9	.4		100.0	233
	65 and More	99.6		.4			100.0	249
	Total	82.8	10.3	3.3	2.2	1.4	100.0	11172
Total	5 - 9	77.3	22.5	.1			100.0	4417
	10 - 14	58.1	30.7	9.9	1.3		100.0	3886
	15 - 19	62.0	9.0	12.7	12.0	4.3	100.0	3080
	20 - 24	67.1	6.8	7.5	9.0	9.6	100.0	2190
	25 - 29	74.0	5.5	5.1	9.0	6.5	100.0	2138
	30 - 34	78.3	3.6	3.8	8.1	6.2	100.0	1743
	35 - 39	85.1	2.8	2.5	5.2	4.4	100.0	1650
	40 - 44	83.3	4.1	2.5	5.6	4.5	100.0	1405
	45 - 49	85.6	4.1	1.8	4.8	3.6	100.0	1017
	50 - 54	86.8	3.9	2.0	4.7	2.6	100.0	894
	55 - 59	86.5	3.5	2.4	4.9	2.7	100.0	451
	60 - 64	89.4	2.8	2.8	3.9	1.1	100.0	611
	65 and More	93.2	2.1	1.5	2.8	.4	100.0	676
	Total	73.6	12.5	5.3	5.3	3.3	100.0	24158

The above Table HH.3 unfolds information on educational attainment with reference to gender. When we observed the literacy rate of the sample population, the facts reveal that more than half (74 percent) of the total sample of 24158 had no education, while the rest had education level ranging from up to primary to secondary and above grades in all the areas. If we narrow down the focus in grades terms then the situation reveals that around 13 percent had education upto primary, only 5 percent upto middle and upto secondary. Only 3 percent had secondary and above education level. Bifurcation by gender exhibits that greater proportion of women was uneducated (83 percent) as compared to men (66 percent). Similar trend is observed for different levels of education also.

Net Attendance Ratio

Education has been one of the few neglected sectors which have not caught up with the growing population in Pakistan and flood made the situation worse. Table HH.4 shows the net attendance ratio of household population age 5–9 years by Regions. The place of residence, living conditions and environment do affect education demand as well as attainment. Table HH.4 shows that one-third of population age 5-9 years have currently enrolled in the schools. Data further reveals that out of 32 percent of net attendance ratio, 35 percent of boys and 28 percent of girls have attended school.

Table HH.4: Net Attendance Ratio (NAR) for Primary School Children
Net Attendance Ratio (NAR) for Primary School Children age 5-9 by Gender and Regions

Region/Districts	Male		Female		Total	
	Percentage	Number	Percentage	Number	Percentage	Number
Total	34.9	2384	27.8	2033	31.6	4417
Punjab	24.4	738	19.9	689	22.2	1427
Sindh	32.5	760	20.2	608	27.0	1368
KPK	63.3	619	56.0	541	59.9	1160
Balochistan	4.5	267	1.5	195	3.2	462

The findings exhibit that the attendance ratio is highest in KPK (60 percent) followed by Sindh (27 percent), in surveyed rural communities of Punjab (22 percent) and Balochistan (3 percent). Gender differentials also show a similar trend i.e. more boys are enrolled in primary schools than girls. Large variations are observed in net attendance ratio at District level; it is highest in Haripur District (74 percent) followed by Mardan (67 percent), Nowshera and Charsada (63 percent). Almost half of the children from Jacobabad, one-third in Peshawar, Rajan Pur, Multan and Rahim Yar Khan Districts are enrolled in schools (Details are reflected in the Annexed Table H.4). In the remaining Districts only one-forth or less of the children are in primary schools. Even this situation is worse in the Districts of Bahawalpur, Muzzaffargarh, Sukkur, Jaffarabad and Naseerabad, where less than 10

percent population age 5-14 years enrolled in the school. The net attendance ratio is lowest in Naseerabad (0.9 percent).

The differentials in educational attainment according to age group provide an indication of the development in education of the population over time. The Table HH.5 on net attendance of population age 5-24 years by single year & gender also shows that it is better in males (33 percent) than females (22 percent). Similar trend is observed by age.

Table HH.5: Net Attendance Ratio (NAR) by Single Year & Gender
According to Single Year Age 5-24 by Gender

Age	Male	Female	Total
5	16.8	14.4	15.7
6	31.9	23.9	28.2
7	42.6	31.7	37.4
8	41.2	33.6	37.7
9	44.8	37.1	41.2
10	40.8	30.9	36.6
11	51.9	42.5	47.4
12	46.8	33.8	41.0
13	44.7	29.1	37.7
14	41.9	22.6	32.7
15	39.8	23.3	32.6
16	34.0	16.5	25.5
17	38.6	18.2	29.2
18	23.2	7.4	16.3
19	21.8	9.0	16.2
20	15.9	5.6	11.1
21	15.1	9.6	12.4
22	10.8	5.0	8.2
23	8.9	9.1	9.0
24	7.8	3.6	5.9
Age 05-24	33.3	22.3	28.3
Number	12984	11172	24156

Professions and Income: Economic Status

Household members who were currently employed preceding the BLS were asked further about their occupations and monthly income. The results are presented in Tables HH.6; more than one-third (36 percent) of the HH population age 17 and above are not doing any work for income. Agriculture is the dominant sector of the economy in Pakistan, and most of the employed persons work in the agricultural sector. BLS indicates that more than one-fifth (21.4 percent) men and women are engaged in agricultural jobs, 16 percent are laborers and 7 percent are employed either

in public or private sector while less than 5 percent people are engaged in business, skilled work and handicraft.

Table HH.6 presents the data also on their monthly income who were involved in any work. The monthly income of 8 percent household population is PKR 10, 000 and above. Around one-third (33 percent) of working population is earning PKR 5000-9999 and 28 percent PKR 3000-4999 on monthly basis. The Table further displays that around one-third (31.4 percent) household members are being paid only upto 2999 rupees.

Table HH.6: Economic Status of Target Population
Percent Distribution of HH Members aged 17 & above according to their Profession & Monthly Income by Regions

Profession/Monthly income		Punjab	Sindh	KPK	Balochistan	Total
Profession	Government sector	.7	3.1	4.5	4.8	3.2
	Private sector	2.8	3.1	5.0	1.7	3.5
	Business	2.2	.6	1.5	.3	1.3
	Skilled of person	.5	5.4	.8	.2	2.0
	Farmer	15.7	29.9	6.4	58.5	21.4
	Seasonal worker	6.5	.4	2.8		2.7
	Student	.7	2.6	6.4	.1	3.2
	Housekeeping	9.4	6.6	1.1	18.3	6.8
	Handicrafts	2.1	2.7	1.1	7.8	2.6
	Laborer	27.7	13.2	15.5		16.1
	Not doing any work	31.7	31.6	51.5	8.2	35.9
	Others	.1	.6	3.4	.1	1.4
Monthly income	Upto 2999	48.2	29.7	6.9	45.3	31.4
	3000-4999	25.5	14.5	42.2	35.7	27.7
	5000-9999	23.7	44.3	37.5	16.8	32.7
	10000-19999	2.5	8.7	10.3	1.3	6.3
	20000+	.2	2.8	3.1	.9	1.9
	Don't Know		.0			.0
Number	Percent	100.0	100.0	100.0	100.0	100.0
	Number	3659	4279	4890	1614	14442

3.1.2 Housing Characteristics

Housing characteristics are obtained for households with at least one adult woman who completed the interview. The questionnaire included information on the source of drinking water for the household. A safe, accessible source of drinking water is important for the health and welfare of household members. These include a piped source within the dwelling or plot, public tap, hand pump, tube well or borehole, protected well or spring, and rainwater. The categorization into improved and non-improved follows as defined by the WHO/ UNICEF Joint Monitoring Program for Water Supply and Sanitation (WHO and UNICEF, 2004).

Housing Structure and Ownership

Following Table HH.7 presents some more important housing characteristics which can be used as socioeconomic indicators for surveyed households. These housing characteristics include ownership of house, fuel used and quality of their housing measured by the housing structure, construction material of the walls and roofs, capacity and sleeping space.

Type of Ownership

It is interesting that eight in ten (83 percent) of the households have their own houses, 12 percent living in rent free houses and 4 percent have the rented accommodation. Among Regions, almost every household in Punjab have their own houses (97 percent) followed by Sindh and KPK (82 and 81 percent respectively), while lowest proportion is observed in the Districts of Balochistan where six in ten households (58 percent) have own houses and 40 percent live in rent free houses (Table HH.7).

Housing Structure and Material Used for Roof and Walls

All over the Regions, around two-third (61 percent) of the households are residing in katcha houses and less than one-fifth (16 percent) in semi-pacca housing structures. At Regional level, katcha houses are more common, ranging from 90 percent in Balochistan to 63 percent in Sindh, except for KPK (35 percent) where housing structures were found pacca.

Table HH.7 reflects also that two-third (66 percent) of houses in flood affected areas uses thatch/ bamboo/ wood/ mud, as the main roofing material for their dwellings, while only 12 percent use reinforced bricks cement or reinforced concrete cement (RCC). The most commonly used material for construction of roofs in all Regions is thatch/ bamboo/ wood/ mud, while 33 percent households in KPK also used reinforced brick cement or RCC for roofing.

More than two-fifth (44 percent) houses used bamboo/ sticks/ mud for the construction of the main walls of the dwelling, Furthermore, one-third houses utilized either mud/ stones or unbaked bricks (28 percent) and one-sixth used cement blocks or cement for the main walls. In Punjab, Sindh and Balochistan walls are commonly made of bamboo, sticks or mud while in KPK cement blocks/ cement are normally used for walls material.

Number of Rooms

Data was also collected on the number of total rooms and sleeping rooms per house. Table HH.7 shows that six in ten houses had single room (59 percent) and 28 percent have two rooms, while slightly higher than 14 percent houses have three and more rooms. Single room house is more common in Sindh and Punjab, while houses consisting of two rooms are generally found in KPK. As far as the sleeping space is concerned, slightly less than three-fourth of houses have only one

sleeping room (69 percent). One-fourth had two and only eight percent houses have three or more rooms for sleeping. Single room for sleeping is more common in all Regions except KPK where two sleeping rooms usually existed (43 percent). Lesser number of rooms reflects congestion which may lead to less hygienic living and poor sanitation.

Fuel for Cooking

Slightly less than three-fourth of households (72 percent) use wood for cooking, while less than one tenth of the households in all flood affected areas use animal dung for cooking that generates smoke that is unhealthy to breathe and create environment pollution. Wood is the most common form of cooking fuel in all areas ranging from 84 percent in Balochistan to 51 percent in KPK (Table HH.7).

Table HH.7: Housing Characteristics
Percent distribution of households by ownership of house, main fuel used for cooking, housing structure, roof and walls material of dwelling, capacity and sleeping space by Region

Housing characteristics		Punjab	Sindh	KPK	Balochistan	Total
Type of household	Rented	.3	.5	13.1	1.3	4.2
	Rent-Free	2.1	17.5	5.0	40.2	12.0
	Mortgaged	.3	.1	.3	.2	.2
	Owned	96.7	81.8	81.4	58.3	83.3
	Others	.6	.1	.2		.2
Source of energy for cooking	Electricity		.2	.6	.8	.3
	Cylinder Gas	.2	.2	1.5		.6
	Biogas		8.4	24.8	1.7	9.9
	Kerosene	.3	.3	.5	.6	.4
	Wood	82.9	76.4	51.3	83.7	71.8
	Straw/Shrubs/Srass	7.8	.2	6.9	.2	4.4
	Cow Dung	8.8	13.4	5.2	13.1	9.6
	Others		1.0	9.1		3.0
Housing structure	Katcha	70.2	62.8	37.0	90.3	60.7
	Semi-Pacca	14.8	12.1	26.6	.2	15.8
	Pacca	11.6	20.2	34.7	1.3	19.7
	Flat		.5	.5		.3
	Constructed House/Bungalow	.1	.2	.9		.4
	Others	3.3	4.1	.3	8.2	3.2
Material of the roof	Thatch/Bamboo/Wood/Mud	72.8	70.7	42.3	95.2	65.9
	Cardboard/Plastic	1.1	.3	3.4	.6	1.5
	Iron Sheets/Asbestos	2.0	4.3	5.4	.2	3.5
	T-Iron/Wood /Brick	20.6	17.9	15.1		15.8
	Reinforce Brick Cement/RCC	1.3	6.0	33.5	.6	12.0
	Others	2.3	.8	.4	3.4	1.4
Material of the walls	MUD/Stones	14.0	5.0	21.5	39.8	16.6
	Bamboo/Sticks/Mud	46.5	64.1	15.2	54.5	43.5
	Unbaked Bricks/Mud	24.7	7.1	5.2	.2	10.9
	Plywood Sheets	.3	.1	.8		.3
	Cartoon/Plastic	.1	.1	.4		.2
	Stone blocks	.2	.2	7.8		2.4
	Baked Bricks	8.9	10.4	10.9	.2	8.9
	Cement Blocks/Cement	2.7	11.3	37.9	.4	15.3
	Tent/Cloth	1.8	.8	.2	3.8	1.3
	Others	.8	.8	.1	1.1	.6
Total rooms in the HH	1	68.9	72.4	28.6	77.2	59.1
	2	21.4	21.0	40.5	19.2	26.6
	3	7.0	5.0	18.4	2.1	9.2
	4+	2.7	1.7	12.6	1.5	5.1
Sleeping rooms in the HH	1	89.9	74.1	39.1	77.0	68.8
	2	8.7	20.7	43.0	19.7	23.6
	3	.8	4.2	11.1	2.1	5.0
	4+	.7	1.0	6.8	1.1	2.6
Total	Percent	100.0	100.0	100.0	100.0	100.0
	Number	1327	1328	1310	530	4495

3.1.3 Household & Livestock Possessions

Information on the presence of specific household goods in the homes, means of transportation, and agricultural land and farm animals is indicative of a household's social and economic well-being which is used to determine the wealth status also.

Household Possessions

The Table HH.8 shows that about eight in ten households in all flood affected areas have electricity, with a considerable differential by Region of residence. The proportion of households having electricity was highest in the surveyed villages in Districts of Balochistan and KPK (98 percent) followed by Punjab (73 percent) and Sindh (67 percent). More than one-fourth of the households having television facility in contrast to 14 percent households have radio. As expected, both these items show large differentials between Regions, KPK has the most facilities whereas people in other Regions owned less HH possessions and the differential for televisions is particularly prominent.

Table HH.8: Household Possessions
Percentage of households possessing various accessories, according to Region

Household possessions	Punjab	Sindh	KPK	Balochistan	Total
Electricity	72.9	66.7	97.8	98.3	81.3
Radio	3.6	11.4	33.0	4.3	14.6
Television	24.0	21.2	44.8	18.1	28.5
Refrigerator	5.4	9.6	38.7	4.0	16.2
Mobile telephone	20.1	46.0	73.2	9.6	42.0
Land line telephone	1.2	.2	1.9	.6	1.0
Room cooler	.7	.8	5.0	2.8	2.2
Air conditioner		2.1	2.7	1.5	1.6
Washing machine	2.6	6.3	30.6	8.7	12.6
Water pump	20.0	9.0	26.0	1.9	16.4
Bed	38.4	17.2	50.6	.9	31.3
Chairs	2.7	3.3	35.2	.4	12.1
Almirah/Cabinet	2.3	5.0	30.8	.9	11.3
Clock	12.9	11.4	61.7	2.6	25.5
Sofa	.9	2.1	22.7	.8	7.6
Sewing machine	14.2	11.7	29.8	9.8	17.5
Camera	.2	.4	4.3		1.4
Personal computer/Laptop	.5	.6	5.7	.4	2.0
A watch	9.6	21.7	36.5	1.5	20.1
A bicycle	32.2	7.2	28.2	2.8	20.2
A motorcycle/Motor scooter/Chunchi	12.6	11.7	8.5	9.4	10.7
An animal-drawn cart	8.4	14.5	4.4	21.3	10.6
A car/truck/tractor	.3	1.0	3.1	.6	1.3
Any HH member has agriculture land	30.4	19.7	16.5	17.5	21.7
Total	1327	1328	1310	530	4495

The Table HH.8 further indicates that more than four in ten (42 percent) of the population has Mobile phone. Consumer's items like refrigerators, room cooler, and washing machines are more likely to be possessed in KPK as compared to other Regions. Only a few households in Balochistan reported owning personnel computers.

In general, people are not very likely to own a means of transport. Bicycles are the most common means of transport, with 20 percent of households owning a bicycle. Overall, only 11 percent of households own a motorcycle, scooter or chunchi/rickshaw and animal drawn carts. A meager percentage of households own a car, truck, or tractor. At Regional level a mixed pattern found for the ownership of transport means. Slightly more than one-fifth (21 percent) of households own agricultural land. In Punjab, around one-third household members are much more likely to own agriculture land than the other Regions.

Livestock Possessions

The presence of livestock in a household has direct effect on health and hygiene of a family. Information on livestock and their number was collected to observe the hygienic conditions of a household through disposal of animal excreta. Table HH.9 unfolds that small proportion of households have 1-4 farm animals. One-third of the households are more likely to have cows/bulls (30 percent) followed by goats (22 percent), chicken (20 percent), buffaloes (18 percent), donkeys (9 percent) and sheep (5 percent), HH in Balochistan are more likely to possess livestock as compared to other Regions.

Table HH.9: Livestock Possessions
Percentage of household possessing various livestock according to type and Region

Ownership of livestock		Punjab	Sindh	KPK	Balochistan	Total
Buffalo	None	82.8	76.0	84.1	90.6	82.1
	01 - 03	16.0	21.9	13.9	7.9	16.2
	04 - 08	1.1	1.8	1.8	1.5	1.6
	09+	.1	.3	.2		.2
Cows/Bulls	None	60.1	78.1	74.4	65.1	70.2
	01 - 03	34.1	16.9	23.4	27.9	25.2
	04 - 08	5.7	4.3	1.7	5.7	4.1
	09+	.2	.7	.5	1.3	.5
Camels	None	98.5	100.0	99.4	97.2	99.0
	01 - 03	1.5		.3	2.6	.8
	04 - 08			.2	.2	.1
	09+			.1		.0
Donkeys etc	None	96.8	84.0	94.7	87.4	91.3
	01 - 03	3.2	15.6	5.0	12.5	8.5
	04 - 08		.3	.2	.2	.2
	09+		.1	.1		.0
Goats	None	73.1	81.6	83.7	66.8	78.0
	01 - 03	17.5	15.1	14.1	23.6	16.5
	04 - 08	8.4	2.9	1.8	7.5	4.7
	09+	1.0	.5	.4	2.1	.8
Sheep	None	92.8	93.7	97.6	98.7	95.2
	01 - 03	4.3	4.1	2.0	.9	3.2
	04 - 08	1.8	1.4	.4	.2	1.1
	09+	1.1	.9		.2	.6
Chicken	None	86.3	75.8	81.1	69.1	79.7
	01 - 03	2.9	12.0	9.8	12.6	8.7
	04 - 08	3.8	8.7	6.9	14.9	7.5
	09+	7.0	3.5	2.1	3.4	4.1
Mean Number of any Live Stock Possession in HH		3.6	3.2	2.9	4.1	3.3

CHAPTER: 3-2

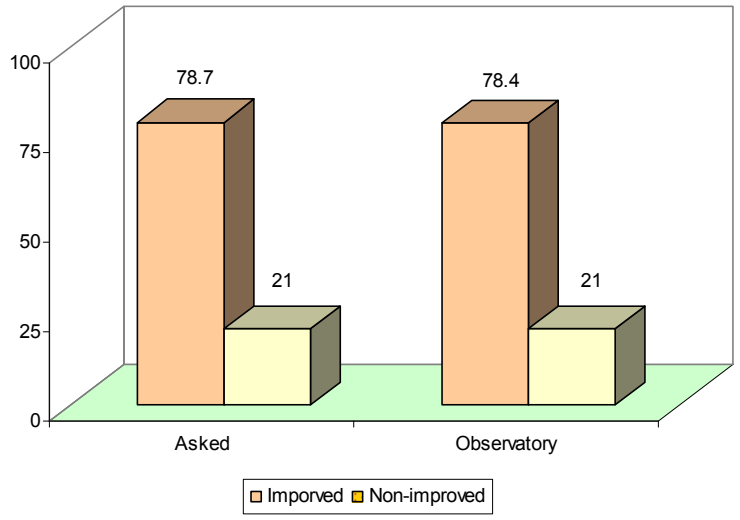
WATER

For any WASH intervention aiming to prevent water borne diseases (WBDs), it is important to know the common water source available for households to obtain water for drinking and domestic purposes and its quality, available means of transportation and storage and problems faced with major water supply. A total of 4495 Household Questionnaires for women and 4436 Questionnaire for Men have been used during the BLS to gather the requisite information in 17 selected Districts. The Household Questionnaires and the Questionnaire for Men were approved by Plan Pakistan and 17 Field Teams comprising of one man and one woman were thoroughly trained in class room as well as in the field to apply these Questionnaires.

3.2.1 Drinking Water Source

Figure W.1 presents information on household drinking water source. It indicates that around 79 percent of the surveyed households have access to an improved source (hand pump, tube well/ borehole & piped water) of drinking water including hand pump (62 percent) and piped water (7.4 percent). In Sindh, almost every household gets drinking water from hand pump (94 percent) in contrast to Balochistan where majority of households depends on canals and karez or ponds of rain water (86 percent)whereas every fifth household in KPK have access to the piped water.

Figure W.1: Drinking Water Source Available for the Surveyed Households



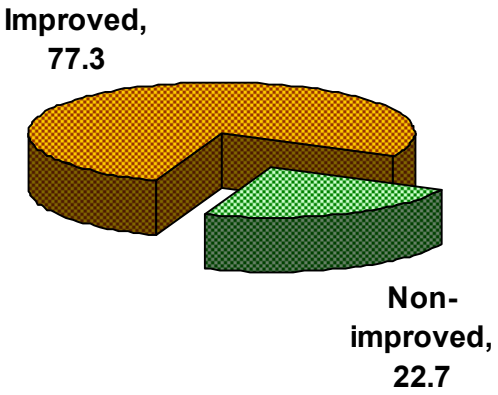
The data reveals that one-tenth fetched water from the tube well/ borehole, 8 percent relied on dug wells and 14 percent of households obtained drinking water from other sources like rainwater, tanker truck, cart with small tank. Regional data shows that in Punjab and Sindh, hand pump is the main source of drinking water while in KPK almost half of the households either have piped water or tube wells. Hand pumps as a main source of drinking water is being used in almost every households of Bahawalpur, Muzzaffargarh, Hyderabad, Jacobabad, Kashmore and Sukkur and none of the households in District Naseerabad have improved source of water. (Details at Annexed Table 1.1).

During fieldwork, the Research Teams observed also the main source of drinking water to confirm the information provided by the respondents. The Tables 1.1 & 3.4 (Annexed) based on observation by the Researchers, depicts the similar position as provided by the female respondent i.e. almost eight in ten households used improved source of drinking water.

3.2.2 Domestic-use Water Source

The following Figure W.2 displays information on water source for domestic use. The Figure portrays almost similar picture of water for domestic use as for source of drinking water. Every eighth household have access to an improved source of water for domestic use including hand pump (61 percent). In Punjab and Sindh, hand pump was the main source of water for domestic use (90 percent) while in Balochistan, majority (85 percent) of the households relied upon non-improved source such as rivers, canals and ponds, to fulfill their needs for domestic purpose (Details at Annexed Table 1.2).

Figure W.2: Type of Water Source for Domestic use in the Households

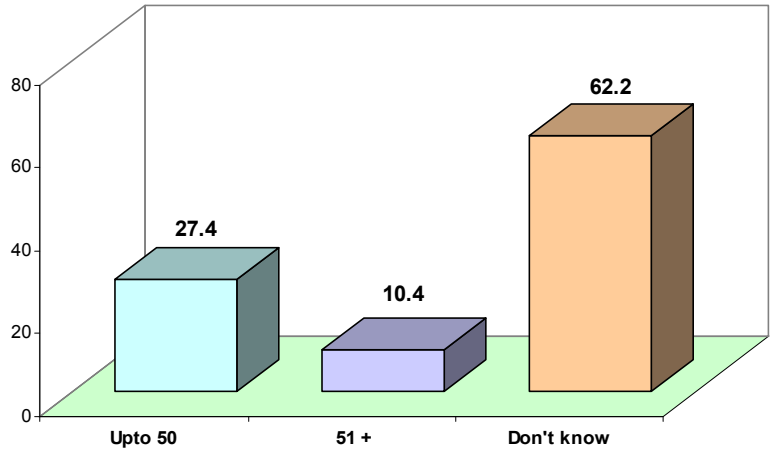


Less than one-tenth of households have piped water or tube wells for domestic use. Less than one-sixth fetched water from other non-improved sources including rain water, tanker, etc. (16 percent). Data shows that no visible variations are found in the percentages of households for their main source of drinking and domestic use water because the main sources of drinking and domestic use water were same all over the sampled areas as reported by the respondents (Details at Annexed Table 1.2).

3.2.3 Water Table in BLS Areas

Knowledge about water table of the area is vital for interventions on water-related facilities. Figure W.3 describes the overall situation of water table in the flood-affected Districts. It was interesting to note that two-third of the households did not know the level of the water table in their area. The average water table is observed to be 49 feet and varies from 30 feet in Balochistan to 63 feet in KPK. Considerable differential is noted among Regions, seven in ten of Balochistan were not aware while 62 percent of households in Sindh knew water table in their areas (Details at Annexed Table 1.3).

Figure W.3: Distribution of Household Knowledgeable about Water Table in their Area



3.2.4 Quality of Drinking Water

Water characteristics are important indicators to determine its quality. This study reveals that almost three-fourth of households reported clean color of water (Figure W.4). A considerable differentials has been observed within Regions, where proportion of clean water is found highest in KPK (92 percent) while lowest being observed in the targeted Districts of Balochistan (11 percent). Among Districts, Naseerabad is the district where almost none of households have clean water. Other low proportion Districts were Jaffarabad and Sukkur (21 and 29 percent respectively).

Figure W.4: Water Characteristics: Color and Taste of Drinking Water

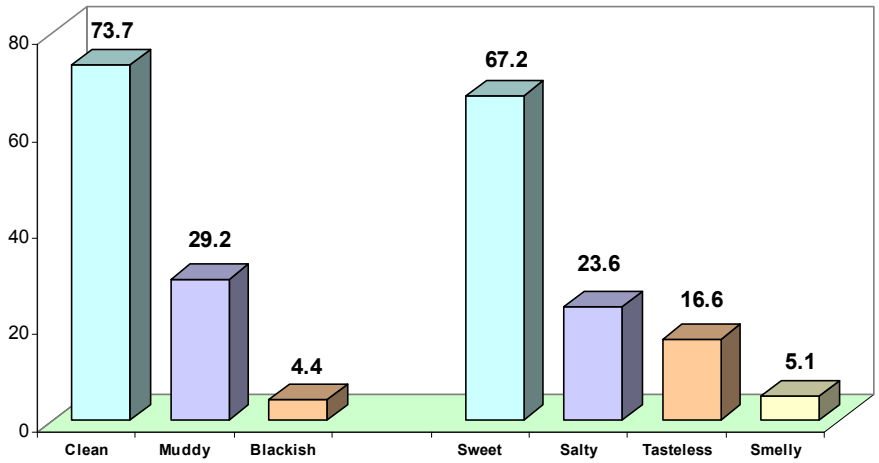
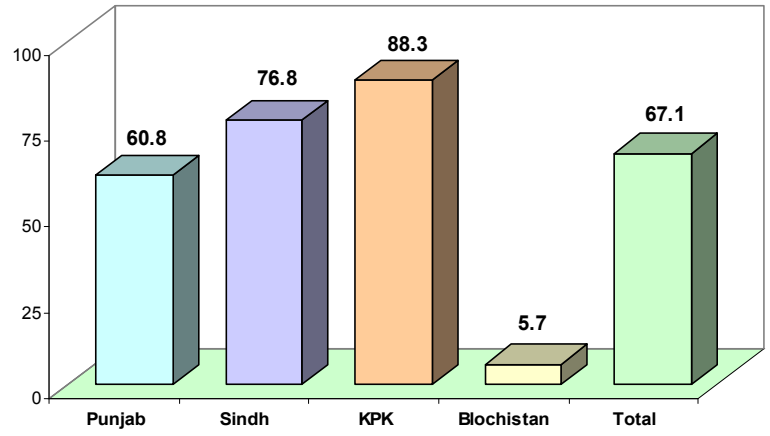


Figure W.4 further displays information about taste of drinking water. Around 85 percent of households reported taste of drinking water either sweet (67 percent) or tasteless (17 percent). The proportion of sweet taste of water was founds highest in Sindh (89 percent) followed by KPK (79 percent) and lowest was observed again in Balochistan (20 percent). Almost one in ten households

reported smelly drinking water and their proportion was highest in Balochistan (23.1 percent).

Figure W.5 shows that 67 percent of households have drinking water clean in color and also sweet/ tasteless. Within the Regions, this proportion is highest in KPK (88 percent) and lowest in Balochistan (5.7 percent only). This combined effect (i.e. clean color and sweet taste of water) had the similar trend within Districts also; in district Naseerabad, none of the household reported clean and sweet drinking water, followed by Jaffarabad (11.3 percent) and Sukkur (27.1 percent) (Details at Annexed Table 1.7 & 3.2).

Figure W.5: Household Availability of Clean and Sweet/Tasteless Water



The information on the characteristics of water gathered from the household women was further validated by the field researchers through observations and it was found that there was only one-point difference in the reported and observed characteristics of water in the households (73.7 percent and 72.4 percent respectively). (Details at Annexed Table 1.7 & 3.2).

3.2.5 Problems with Major Water Supply Source

More than half households reported that they faced problems in getting water from major supply source (Table W.1). The situation was worst in Balochistan where 93 percent have problems such as irregular supply or dried up source (canals, karez and ponds), followed by Punjab and Sindh (51 percent and 55 percent respectively) where the source is spring water or the piped water and supply is irregular or it is far from households. Every household in the district Naseerabad reported problems faced for major water supply followed by again Jaffarabad (86 percent), Kamber Shah Dad Kot (77 percent), Jacobabad (72 percent) and Rajan Pur (74 percent).

Table-W.1: Problems with Major Water Supply Source

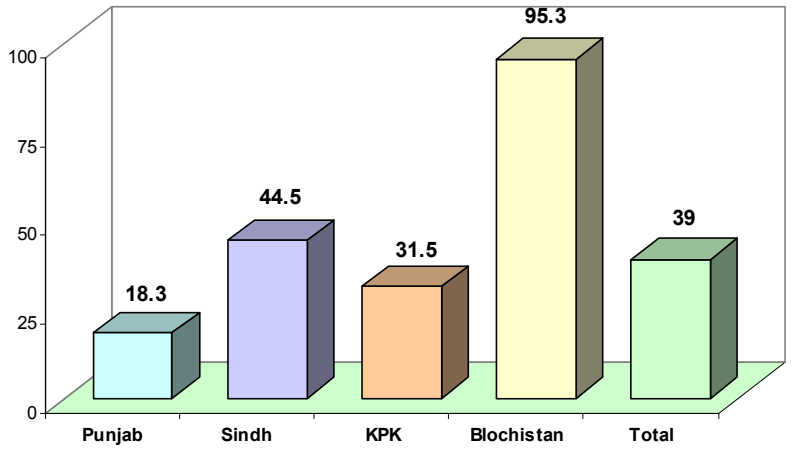
Problems faced	Total	Punjab	Sindh	KPK	Balochistan
No problem	45.1	48.8	45.3	56.6	7.0
Supply is irregular	9.8	4.1	10.7	10.2	21.3
Source is far	16.2	.7	41.8	11.1	3.2
Source is dries up	1.5		1.6	1.8	4.2
Others	.6	.1	.2	1.5	.4
Don't know	1.4	1.4	.8	2.5	.2

The Table W.1 shows also that every one-fourth of households reported that either supply was irregular or source is too far away to bring water to the household (Details at Annexed Table 1.4).

3.2.6 Water Transportation due to Non-availability of Water Source within the HH

Overall, 40 percent were fetching water from outside the home (Figure W.6). Overwhelming majority of the households in the Districts of Balochistan fetched water from outside the household (95.3 percent) followed by Sindh (45 percent). More than 70 percent of households reported to fetch water from outside households in the Districts Jaffarabad, Kamber Shah Dad Kot and Jacobabad (91, 75 and 73 percent respectively) while 100 percent households in Naseerabad reported the same (Details at Annexed Table 1.5).

Figure W.6: Distribution of Household Fetching Water from Outside the Home



Households, not having water source within their premises were asked for the time required to fetch water from outside the household. About one-third of all households take less than 15 minutes to fetch drinking water, while 22 percent take more than 30 minutes or longer.

Data on the distance from the water source reveals that more than two-third of all households fetched water within 1-km distance and only two percent fetch water from a distance of three or

more Km. Substantial variation has been observed across Regions for time taken to fetch water from outside the household. In the Districts of Balochistan, 90 percent of households took more than 15-minutes to get water while in the Districts of Punjab and KPK, almost 60 percent households fetch water within 15-minutes. Among Districts, 80 percent of households of Peshawar, Mardan, Charsada, Kashmore, Rahim Yar Khan and Bahawalpur, could fetch water from outside the households within 15-minutes (Details at Annexed Table 1.5).

When asked the same questions from male of the household, their proportion of being aware about fetching water from outside the household was almost similar (39 percent and 41 percent respectively). Also it was observed that most of the males did not know the distance from the source. It indicates that most of the women in the household take care of this job.

3.2.7 Utensils for Fetching Drinking Water and its Cleansing Frequency

Table W.2 describes the type and frequency of cleaning of utensils used for fetching water from outside the household. It indicates that around six in ten of household used earthen ware and one-sixth of the household reported to use Plastic bucket. There was considerable difference for using different types of utensils within Region; in Balochistan, more than 92 percent of household used earthen ware for fetching water followed by Sindh (63 percent). On the other hand 55 percent of household used plastic buckets in KPK (Details at Annexed Table 1.8).

Table-W.2: Utensils for Fetching Drinking Water and Cleansing Frequency

Type and Cleanliness of utensils used		Total	Punjab	Sindh	KPK	Balochistan
Kind of utensils used	Plastic Bucket	17.1	14.9	5.1	55.4	1.2
	Bucket Lid	5.8	.4		24.1	.4
	Earthen ware	57.2	49.6	62.5	11.0	92.3
	Metal Container	5.1	1.7	7.3	4.4	4.8
	Others	14.7	33.5	25.0	5.1	1.4
	Don't Know	.1		.2		
Frequency of cleaning utensils	Within Week	87.4	95.8	95.0	98.5	97.6
	Never	2.1	2.9	4.3	1.2	
	Don't Know	.5	1.3	.7	.2	
Number		1756	247	592	412	505

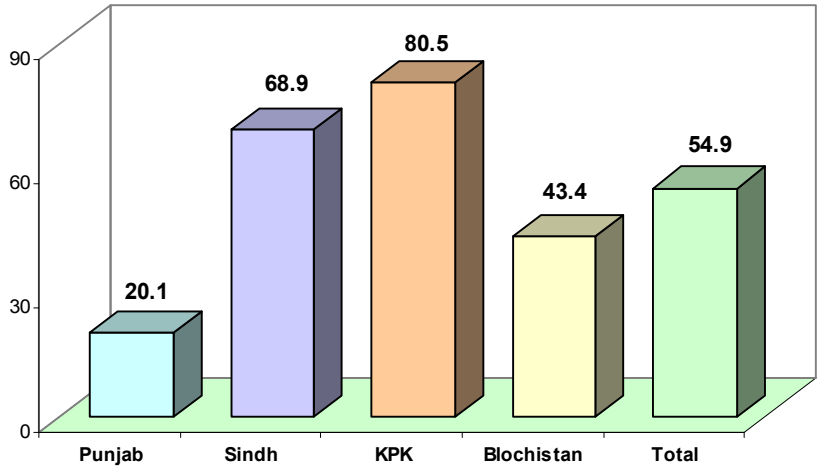
While answering the question about the frequency of cleaning the utensils used for water fetching, more than 80 percent of households told that they cleaned their utensils on daily-basis (Table W.2). The proportion varied from 98 percent in Balochistan to 95 percent in Sindh. The qualitative data indicated that the water storage utensils were washed usually with simple water and sometimes with soap or some other detergent.

3.2.8 Water Storage at Households

To prevent WBDs, it is also mandatory that drinking water storage places in the household should be hygienically clean and safe, properly and regularly maintained, and properly cleaned utensils are used for water storage. To obtain this information, number of question were asked in order to ensure the quality of water storage places in the household.

Figure W.7 reveals that 55 percent of households surveyed in the study, had water storage facility. Among Regions, households in KPK were with the highest proportion for having water storage facility (81 percent) followed by Sindh (69 percent) and probably because of readily available water from hand pumps, only one-fifth of the households in the surveyed Districts of Punjab had such facility. Hyderabad, Jacobabad, Peshawar, Mardan, Charsada and Jaffarabad are among high proportion Districts where water storage facility was observed in more than 90 percent households while Rajan Pur, Bahawalpur, Sukkur and Naseerabad had very low proportion of having water storage facility; the HH with low storage capacity have to fetch water 2-3 times daily (Details at Annexed Table 1.9).

Figure W.7: Distribution of Household having Water Storage Facility



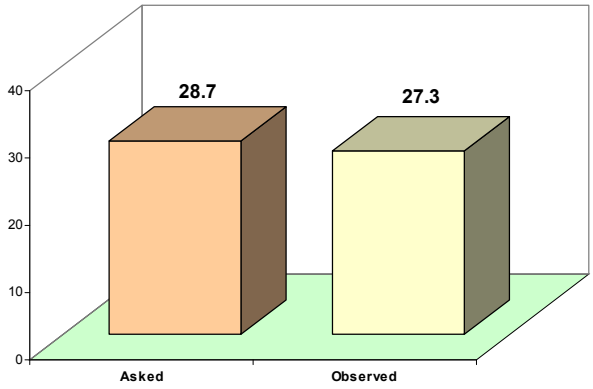
Among those who have water storage facility, were asked about whether it was being covered or not and the frequency of cleaning of water storage facility; Data shows that around 90 percent of households used to covered the water storage facility and three-fourth of household cleaned the storage facility daily (Details at Annexed Table 1.9).

In addition to asking about water storage from the female respondent, field research teams also observed and recorded more or less the same position as stated by respondents themselves i.e.

more than 43 percent of households did not have water storage facility and 67 percent of all the households cleaned water storage containers (Details at Annexed Table 3.1).

Regarding the practice of children to put their hands while taking out the water from the storage facility, it is reported that in 29 percent of households, children used to put their hands in water storage facility directly thus causing water pollution (Figure W. 8); (Details at Annexed Table C1).

Figure W. 8: Practice among Children for Putting Hand into Water Storage Facility



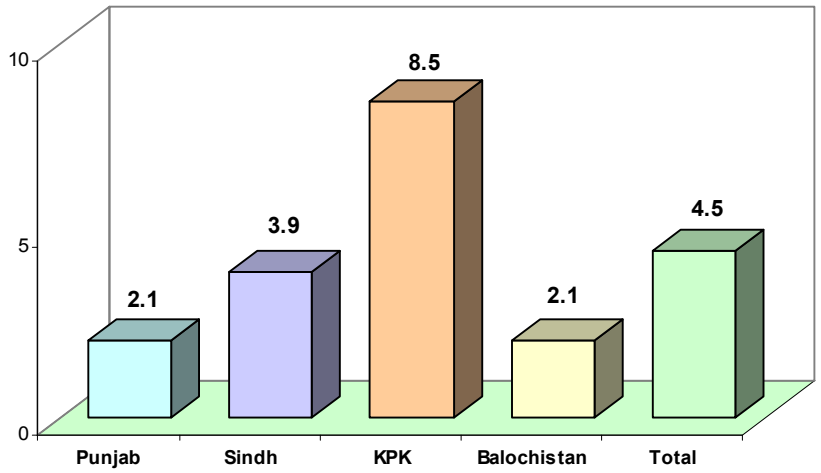
It was noticed by the field teams that in more than one-third of the households, children used to put their hands in drinking water storage facility. This situation was worse in Balochistan where 90 percent of children in the household were putting their hands in water followed by Sindh (31 percent) (Details at Annexed Table 3.2).

When asked about any stagnant/ dirty water close to water storage facility, it was replied by 34 percent of household that there was either open drain or stagnant water nearby (24 percent). Observations by the field team confirm that 35 percent households had open drains and 25 percent stagnant water near to water storage facility (Details at Annexed Table C.2).

3.2.9 Drinking Water Treatment before Use

In the context of WBDs prevention it is vital to know if people of the flood affected Districts are doing any water treatment to make it safer for drinking purpose. Figure W.9 reveals that only one in twenty households is doing any water treatment such as boiling (21 percent), filtration with cloth & sand (22 percent), exposure to sunlight (6 percent). This proportion was lesser in the Districts of Balochistan where only 2.1 percent household doing any water treatment, followed by Sindh (3.9 percent). The households in Districts of KPK seem to be more in practice of water treatment as around one in ten households is doing it (9 percent). (Details at Annexed Table 1.6).

Figure W.9: Households doing Drinking Water Treatment



CHAPTER: 3-3

SANITATION

3.3.1 Availability of Toilet Facilities:

The sanitary situation of a household has direct implications on its hygienic status and health of household members. Absence of sanitary disposal of waste exposes people to risk of acquiring infections and other diseases. Figure S.1 presents information on improved sanitation facilities present before and after the flood. Figure S.1 displays that 26 percent households were using improved toilet facilities (Improved toilet facility includes: Flush/pour flush, pipe sewerage system, septic tank, ventilated pit latrine, pit latrine with slab) at the time of BSL interviews. Improved toilet facility included 20 percent flush or pour flush followed by pit latrine with slab (4.8 percent). It is presumed that the flush or pour flush facility in the household would be connected to some drainage system. It depicts similar trends of present toilet facility in the households as compared to type of facility available before the flood (Details at Annexed Table 4.1 & 4.2).

Figure S.1: Improved Toilets Facility in the Household: Present and Before Flood

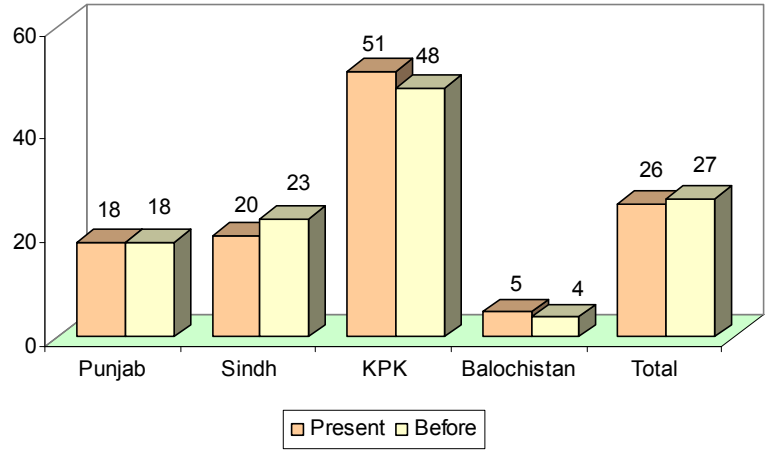
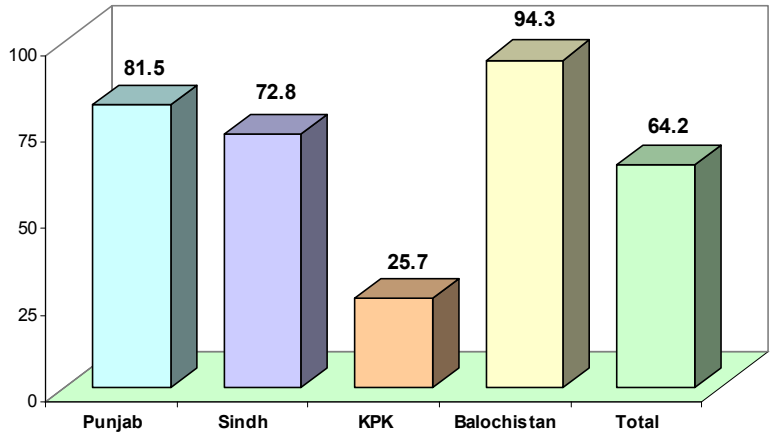


Figure S.2 portrays the present open defecation situation by Regions. It displays that overall 64 percent households were practicing open defecation. The lowest proportion of open defecation practices is observed in KPK (26 percent) and it is raised to 94 percent in Balochistan. Among Districts, this condition was worse in Naseerabad, where almost every household was practicing open defecation, followed by Bahawalpur, Jaffarabad, Sukkur, Multan and Muzzaffargarh (99, 94, 90, 90 percent respectively) (Details at Annexed Table 4.1 & 4.2).

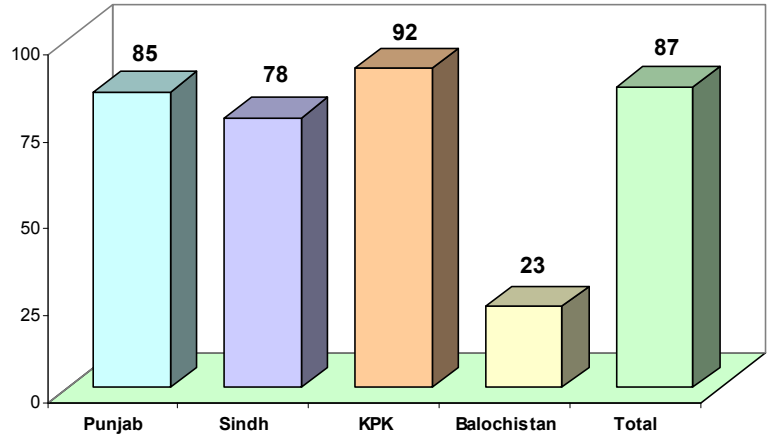
Figure S.2: Distribution of Household Practicing Open Defecation



3.3.2 Source of Funding for Presently Constructed Toilet Facilities at HH

In this study, a number of questions were asked from households having any toilet facilities about the funding source for building the present household latrine and time of construction i.e. before or after the flood. Figure S.3 elicits that around nine in ten households self-funded the construction of toilet (87 percent). Across Regions, similar trend is exhibited except in Balochistan, where only 23 percent households had self-funded constructed toilets.

Figure S.3: Self-Financed Construction of Toilet in the Household



Data reveals that overall eight percent of households constructed their toilets with the support of NGOs or any other village based organizations. It is noticeable that 54 percent households in Balochistan constructed donor-funded toilets followed by Sindh (19.1 percent) (Balochistan results needs careful consideration as HH having toilet facility is very small i.e. only 5.6 percent and the rest (over 94 percent) are practicing open defecation. It may also be highlighted here that after the

floods, more people (over 94 percent) are practicing open defecation as compared to their proportion before floods (89.1 percent); this might be due to the flood caused damages in Balochistan).

Data further disclosed that around three-fourth of household toilets had been constructed before flood (72 percent). However situation is different in Balochistan and Sindh where majority of the households constructed their toilet facility after the flood (53 percent and 38 percent respectively) (Details at Annexed Table 4.3).

3.3.3 Toilets Characteristics

Figure S.2 in para 3.3.1 indicated that 53 percent of the surveyed HH had toilet facilities and these HH were enquired about toilet characteristics including number of toilets in the household, their functional status and a separate latrine for men and women. Table-S.1 displays only eight percent households have more than one toilet.

Functionality and availability of separate latrines for males and females shows the healthcare attitude of households of an area. Around nine in ten household having toilet facility had only one functional toilet facility (88 percent). Only eight percent households reported that they had separate toilet facility for men and women in the household (Details at Annexed Table 4.4).

Table-S.1: Toilets Characteristics

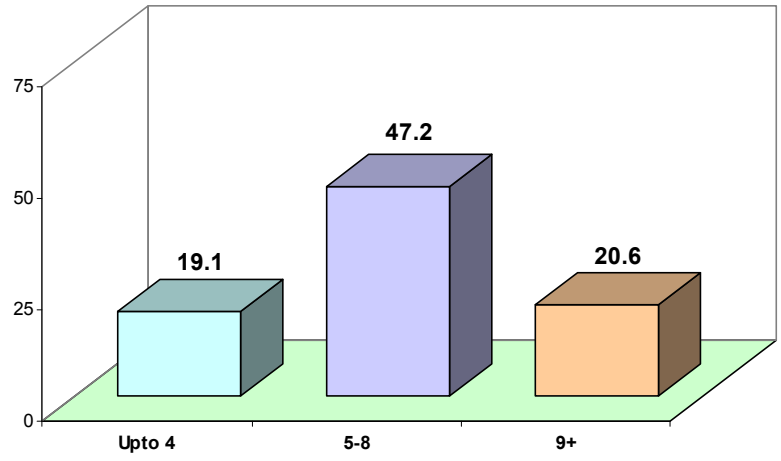
Region	Number of Toilets in the HH			Total		Functional latrine	Separate latrine for Men and Women
	1	2	3+	Percent	Number		
Total	91.8	6.3	1.9	100.0	1567	87.6	7.8
Punjab	98.7	1.3	--	100.0	237	77.1	2.9
Sindh	94.4	5.3	0.3	100.0	342	90.3	16.7
KPK	88.9	8.1	3.0	100.0	960	89.5	6.1
Balochistan	100.0	--	--	100.0	28	80.0	.0

Table-S.1 further shows the position of toilet characteristics across Regions. It has been observed that the proportion of having more than one toilet is highest in KPK (11 percent) and none of the household in the Districts of Balochistan have more than one toilet. Among Regions, maximum proportion of functional latrines was located in Sindh followed by KPK (90.3 percent and 89.5 percent, respectively) and it drops down to 77 percent in Punjab.

Use of a toilet by a number of HH members increases the chances of spread of infectious disease. Figure S.4 describes the congestion in using the toilet in the household. It shows that around one-

fifth of the households have more than nine people using the same toilet facility (21 percent). This practices increases the chances of less cleaning, which ultimately lead to un-hygienic condition of the toilets. This situation more grave in Sindh (35.2 percent) followed by Punjab (17.1 percent) (Details at Annexed Table 4.6).

Figure S.4: Number of Persons using HH Toilet Facility



Availability of Hand washing facility in or near the toilet indicates the level of awareness of the individuals about healthcare. Table-S.2 presents the physical hand-washing facilities nearby/ in the toilet. Table-S.2 explains also that only one-fourth of the households have water tap (24.5 percent) and more than one-third household have bucket & soap facility (36 percent). Another 36 percent of household had no hand washing facility nearby/in the toilets, clearly indicating poor condition of hand washing attitude and practices of peoples living in flood affected areas. In Punjab, around 65 percent household either have water tap or bucket & soap facilities for hand washing followed by KPK (63 percent) and Sindh (53 percent), while lowest was observed in Balochistan where one-third have these facilities (30 percent) (Details at Annexed Table 4.6).

Table-S.2: Hand Washing Facilities nearby/in the HH Toilet

Region	Physical hand-washing facility nearby/in the toilet					Total	
	Tap	Bucket & soap	No facility	Others	Don't know	Percent	Number
Total	24.5	35.8	35.9	2.5	1.2	100.0	1609
Punjab	23.7	40.8	23.7	9.0	2.9	100.0	245
Sindh	7.5	45.7	44.0	1.4	1.4	100.0	361
KPK	31.6	31.2	35.1	1.4	.6	100.0	973
Balochistan	6.7	23.3	63.3	--	6.7	100.0	30

Table-S.3 describes the habits and practices of toilet cleaning in the household; it displays that more than nine in ten households clean their toilets daily including one-third cleaning their toilets twice a day (29 percent). It is noticeable that almost every household in KPK and Sindh reported to clean their toilets daily (95 percent) followed Punjab (76 percent). Table-S.3 further depicts that in Balochistan 58 percent of households having latrines washed their toilets twice a day, which seems to be on the higher side may be because of over reporting (Details at Annexed Table 4.13).

Table-S.3: Toilet Cleaning Practices

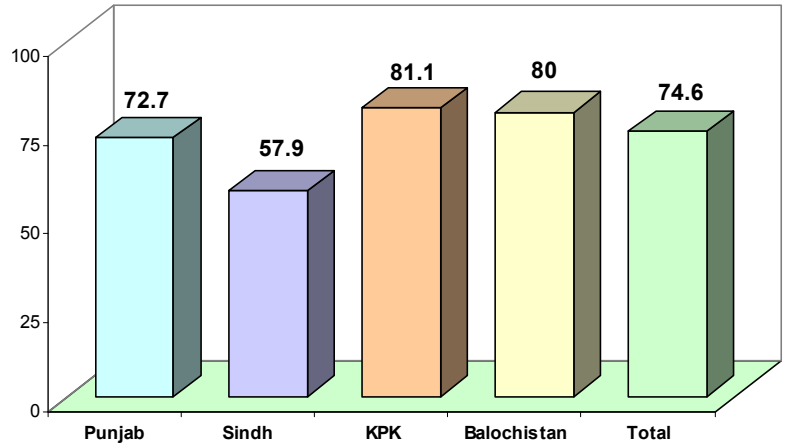
Region	Frequency to clean toilet facility				Person who cleans toilet					Number
	Twice a day	Once a day	Weekly	Others	Respondent	Adult men	Adult women	Servant	Others	
Total	28.8	62.6	6.9	1.7	5.1	3.3	96.5	1.0	.4	4495
Punjab	21.9	53.9	18.4	5.7	6.4	.9	93.6	.5	.5	1327
Sindh	31.4	62.5	5.4	.6	1.5	2.1	99.1	1.2	--	1328
KPK	29.2	65.4	4.2	1.2	6.2	4.2	96.2	1.1	.5	1310
Balochistan	58.3	8.3	33.3	--	--	--	100.0	--	--	530

Table-S.3 adds information about the persons cleaning the toilet. It is clearly indicated that adult women take the charge or responsibility of cleaning the toilet. A similar trend has been observed across Regions and Districts. (20.0 percent) (Details at Annexed Table 4.13).

Due to lack of facilities and awareness about the importance of environment sanitation, people in rural areas do not consider the significance of safe disposal of their toilet waste that becomes one of the prime reasons for their poor health. In order to assess household pattern regarding toilet waste disposal, respondents were asked about the place where they used to dispose off their toilet waste; 80 percent disposed-off waste either by throwing into garbage or in the field/road (50 percent and 13 percent, respectively). (Details at Annexed Table 4.12).

Figure S.5 displays information about the respondents' satisfaction level on place of defecation. It shows that two-third households were satisfied with their presently available toilets. In KPK and Balochistan, the proportion of level of satisfaction found highest (81 and 80 percent respectively) followed by Punjab and Sindh (73 percent and 58 percent respectively). The results of Balochistan need careful interpretation as only 30 households had toilet facilities among 532 households covered (266 households in each district of Naseerabad and Jaffarabad) (Details at Annexed Table 4.7).

Figure S.5: Distribution of Respondents Satisfied with Households Toilets



Data describes that the main causes of dissatisfaction on household toilet, was "no privacy" (37 percent) followed by "Difficult to use" (23 percent). KPK and Balochistan reported "no privacy" as a foremost cause, while Punjab reported un-availability of water (44 percent) as major reason of dissatisfaction of the household having toilet facility. Privacy of the household toilets might be compromised due to its unsuitable location or non-availability of door/ curtain at its door thus causing dissatisfaction among the users/ respondents. (Details at Annexed Table 4.7).

3.3.4 Open Defecation Practices among HH without Toilets

This study unveils that 64 percent of households practices open defecation. Therefore, numbers of question were asked from those households who were practicing open defecation, in order to assess and determine their knowledge, attitude and practices about open defecation.

Knowledge about Hazards of Open Defecation

Figure S.6 displays that about six in 10 respondents reported "open defecation is dangerous to health (58.4 percent)". Among Regions, the proportion varies from 60 percent of HH in Sindh to 49 percent HH in Balochistan, who were aware about hazards of open defecation. In Districts Hyderabad, Jacobabad, Bahawalpur, Kashmore, Jaffarabad and Multan, majority of households aware that "open defecation is dangerous (more than 80 percent)" (Details at Annexed Table 4.8).

Figure S.6: Knowledge about Hazards of Open Defecation

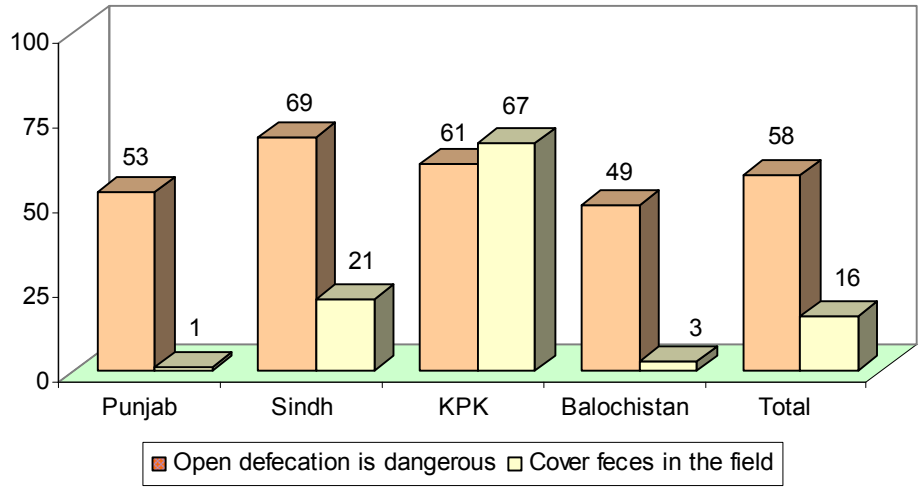
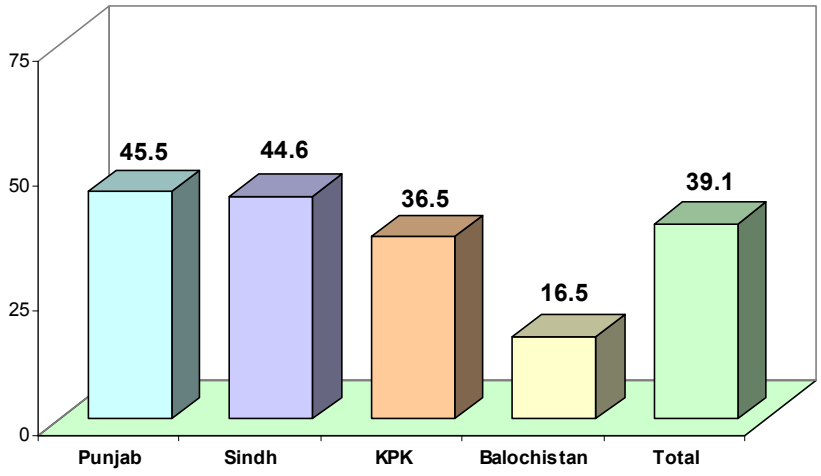


Figure S.6 also showed that more than one-sixth of households were practicing to cover the feces in the field (15.8 percent). Region wise, households in KPK have the highest proportion for practice to cover feces in the field (67.1 percent) followed by Sindh (21 percent) and lowest in Balochistan. Only Hyderabad and Charsada were the Districts where majority of the households covered feces in the field (89.9 percent and 84.5 percent respectively) followed by Mardan and Peshawar (72.2 and 67.5 percent respectively) (Details at Annexed Table 4.8).

Intentions to Build Latrine

This study also covers the intentions to build latrine among people who either have no toilet or non-functional toilet in their households. Figure S.7 elicits that four in ten households wanted to build latrine (39.1 percent); the proportion was noted highest in Punjab (45.5 percent) followed by Sindh (44.6 percent) and drops down to only 17 percent in Balochistan. In Districts Bahawalpur, Rajan Pur and Jacobabad where more than 90 percent households intended to built a new latrine in the household (Details at Annexed Table 4.9).

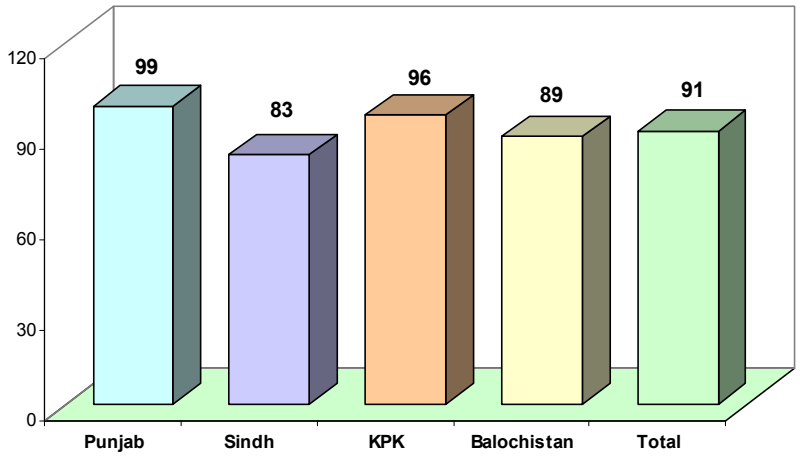
Figure S.7: Intentions to Build Latrine in the Household



Main Reason for Not Building Latrine

When asked about the main reason for not building household latrine, almost every household reported "no money" as the main cause (91.3 percent). In Balochistan, 11 percent households also reported "no need" to built latrine in the household (Details at Annexed Table 4.9). This finding reflects that if financial assistance is made available, majority of the HH currently without toilets will be willing to build latrines in their house.

Figure S.7a: Financial Reasons Hampering Intention to Build Latrine



Estimated Cost for Construction of a Household Latrine

When enquired about an estimated cost of building a latrine (both for surface and underground structure), most of the respondents were unaware of the estimated cost for surface and underground structure (88 percent and 92 percent, respectively (Table S.4). This proportion is more in Balochistan followed by Punjab, KPK and Sindh (Details at Annexed Table 4.10).

Table-S.4: Estimated Cost for Building HH Latrine

Region	Estimated cost of building a latrine - Surface structure					Estimated cost of building a latrine - Underground structure					Total	
	Upto 5000	5001 - 10000	10000+	Don't know	Not mentioned	Upto 5000	5001 - 10000	10000+	Don't know	Not mentioned	Percent	Number
Total	3.0	8.4	1.0	70.6	17.1	2.5	4.8	1.0	65.2	26.5	100.0	3058
Punjab	3.1	6.4	--	76.9	13.6	1.5	7.6	.2	79.0	11.7	100.0	1136
Sindh	1.7	15.0	2.6	58.3	22.4	2.5	2.5	2.6	62.2	30.2	100.0	1003
KPK	9.2	8.0	.7	77.3	4.8	8.0	8.4	.7	78.1	4.8	100.0	415
Balochistan	.4	--	.2	75.0	24.4	.4	--	--	29.2	70.4	100.0	504

Willingness to Contribute for Construction of HH Latrine

It is vital for an organization who intends to build the toilets in the communities, to know the willingness and extent of people to contribute (both physically and financially) in the construction of toilet in their households. Figure S.8 indicates that seven in ten households were willing to participate physically while one-third households (31 percent) were ready to contribute financially for the construction of new toilets in their households.

Figure S.8: Willingness to Contribute for Construction of HH Toilet

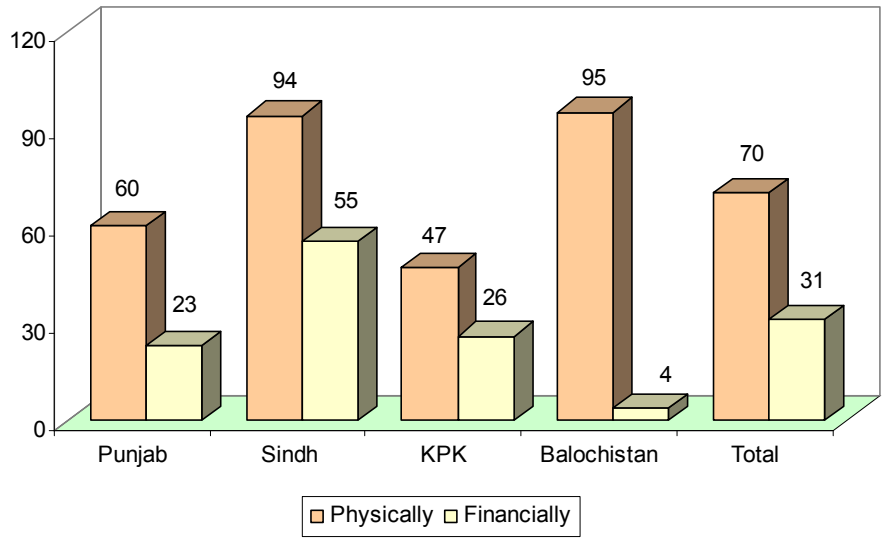


Figure S.8 further elaborates about willingness to pay across Regions. Households in Balochistan and Sindh show maximum proportion for their willingness to participate physically against KPK having the lowest (47 percent). Again, Sindh stands on top to put in cost for the construction of toilets (55 percent) followed by KPK and Punjab (26 percent 23 percent respectively). It is noticeable

that even 95 percent of households in Balochistan agreed to contribute physically while only four percent were keen to pay for the construction of toilets. Among Districts, Jacobabad, Hyderabad, Rahim Yar Khan, Jaffarabad and Naseerabad, more than 90 percent households agreed to provide physical support as compared to Districts Jacobabad and Hyderabad, where majority of HH were ready to pay (in cash) also for construction of new toilets in the households (Details at Annexed Table 4.11).

3.3.5 Animal Excreta Disposal

People living in rural areas mostly keep animals for getting some economic benefit from them. It is equally important to properly dispose-off the animal waste as human excreta, in order to make households and its surroundings hygienically livable. A number of questions were asked about the availability of livestock in the household and ways to dispose off their waste.

Figure S.9 displays that around half of the households had livestock (46.2 percent).Similar trends observed among different region. Among Districts, more than 80 percent households having livestock were the Rajan Pur and Kamber Shah Dad Kot (Details at Annexed Table 2.3).

Figure S.9: Households Livestock Possessions

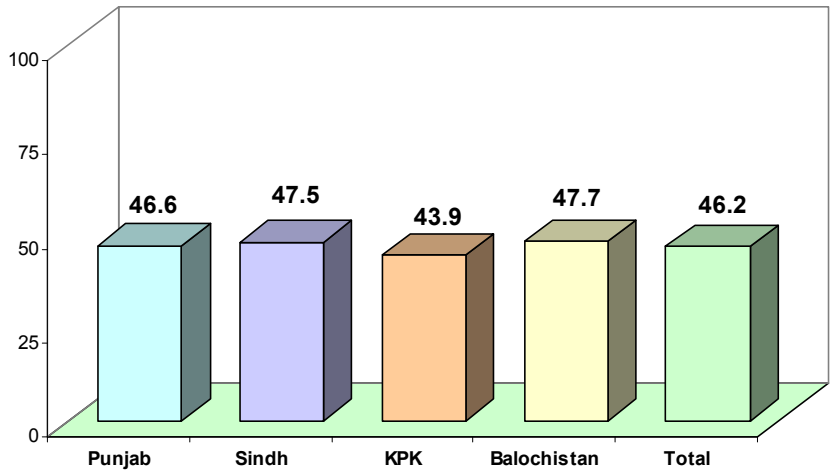


Table-S.5 reveals methods of disposing off the animal excreta; it shows that almost half of the HH used animal excreta as fuel for burning (domestic use) and one-third HH used it for agriculture purpose. In KPK more than three-forth households used animal waste in agriculture in contrast to 95 percent households in Balochistan which used it as fuel for burning followed by 66 percent in Sindh (Details at Annexed Table 2.3) (Details at Annexed Table 2.3).

Table-S.5: Methods for Disposing off the Animal Excreta

Region	Way to dispose off the animal excreta				Total	
	Agriculture Use	Burn (For Domestic Use)	Wall Coating	Others	Percent	Number
Total	36.3	46.7	10.1	6.8	100.0	2045
Punjab	31.5	39.8	24.5	4.2	100.0	600
Sindh	17.0	66.3	2.3	14.4	100.0	617
KPK	77.5	10.7	7.9	3.9	100.0	568
Balochistan	3.5	94.6	.4	1.5	100.0	260

3.3.6 Environmental Sanitation

Perceived Attribute of a Clean & Healthy Village

It is essential to know people perception about a clean and healthy village; this may lead to formulate interventions more effectively. In this study, a question was asked: what are the attributes of a clean and healthy village. Table-S.6 provides the clean and healthy attributes of a village as perceived by the surveyed households.

Most preferred attributes reported by the households was “Every households owns latrine” (53.6 percent), followed by “Everyone uses latrines (including children)” (40.1 percent). But proportion of awareness about most critical attributes like healthy citizenry, clean drinking water availability, no stagnant water around and clean public places were upto 30 percent (8.2, 20.3, 28.0 6.9 percent, respectively) (Table-S.6).

In response to the questions about attributes of a clean and health village, in Sindh, the commonest attributes reported was “Every household owns latrine” (76 percent) followed by 59.7 HH in Punjab, in KPK, “No mosquitoes” (45.4 percent) (Details at Annexed Table 6.9).

Table S.6: Perceived Attributes of a Clean & Healthy Village

Region	Perceived Attributes of Clean & Healthy Village														Number
	Every HH owns latrine	Every one uses latrine (including children)	No waste scattered around	No waste water stagnant around	Water bodies are clean	Clean drinking water availability	Market places is clean	Clean public places	Clean sea shore	All institutions are clean	Healthy citizenry	No mosquitoes	No cow dun heap	Others	
Total	53.6	40.1	23.0	28.0	19.0	20.3	19.1	6.9	8.3	8.1	8.2	8.5	12.4	2.4	4495
Punjab	49.7	36.6	23.0	22.5	10.2	16.8	6.3	3.0	2.9	2.8	3.0	4.6	15.2	1.4	1327
Sindh	76.0	40.2	15.1	30.1	13.8	17.7	27.9	1.9	5.7	4.2	6.8	1.1	8.0	1.1	1328
KPK	36.7	45.4	32.2	32.4	38.1	21.1	24.4	15.6	16.3	13.2	13.4	13.4	18.6	5.6	1310
Balochistan	49.1	35.1	20.0	25.5	7.2	33.2	16.0	7.7	8.7	18.7	12.1	24.5	.8		530

Perceived Benefits of a Clean Village

This study collected information on the perception of households about the benefits of a clean village. Their responses are linked with the attributes of clean and healthy village already stated by them, therefore, guide to formulate better interventions for making village clean and healthy.

Table-S.7 presents benefits of a clean village as reported by the households. More than 41 percent households perceived "Status of villagers improved" as one of the major benefit of clean village, followed by "Increased the beauty of the village" and "healthy generations" (37.5 percent and 32.7 percent, respectively). Overall, "No communicable disease" is one of the important benefits of the clean village, reported by 25 percent of the households.

Table-S.7: Perceived Benefits of a Clean Village

Region	Perceived Benefits of a Clean Village							Number
	Status of village improved	Status of villagers improved	No communicable diseases	Increase the beauty of the village	Healthy generations	Others	Don't know	
Total	36.7	41.4	24.8	37.3	30.5	.4	5.8	4495
Punjab	13.8	39.0	20.2	14.9	33.6	.1	6.5	1327
Sindh	52.6	44.1	30.3	48.4	36.4	.5	10.2	1328
KPK	31.9	31.1	24.6	55.5	25.4	.5	2.7	1310
Balochistan	66.2	66.4	23.2	20.4	20.6	.2	.6	530

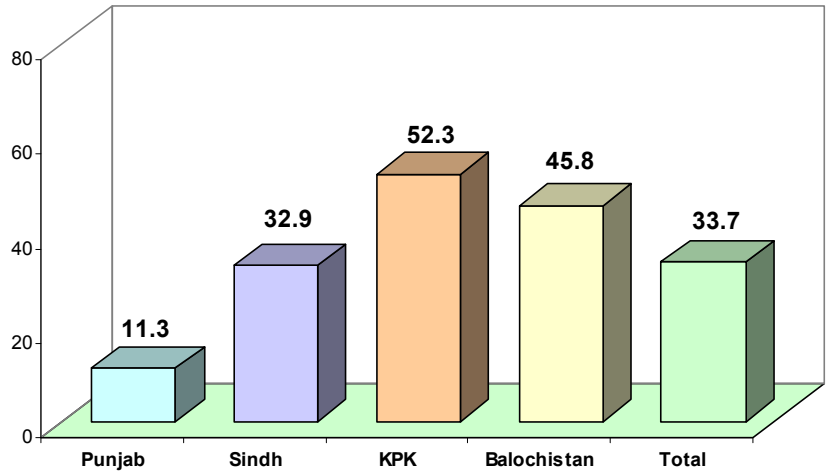
Table-S.7 further illustrates regional differentials; in Balochistan, highest benefits reported by the household was "Improved Status of village" (66.2 percent) followed by Sindh, 52.6 percent. In KPK

and Punjab, 56 percent and 48 percent of households, respectively, reported "Increased beauty of the village" as a benefit of clean village (Details at Annexed Table 6.10).

Knowledge about Hazard of Improper Waste/ Garbage Disposal

Figure S.10 describes the level of knowledge among respondents on hazard of improper disposal of HH waste/ garbage (containing organic and inorganic materials). It depicts that more than one-third households were aware of the hazards of improper waste disposal (34 percent). KPK has the highest percentage of households having knowledge on hazard (52.3 percent) and it drops down to 33 percent in Sindh. More than 80 percent of the households in Districts Jaffarabad and Hyderabad had awareness about hazard, while less than 10 percent were observed in Districts Jacobabad, , Sukkur, Rajan Pur, Rahim Yar Khan, Muzzaffargarh and Naseerabad (Details at Annexed Table 4.19).

Figure S.10: Knowledge about Hazard of Improper Waste Disposal



Sanitary Condition in the Villages

Sanitary condition determines the health standard of the people living in an area. It is considered to be a vital indicator of health condition of individuals as well. Table-S.8 displays the existing sanitary condition of villages in the area.

Table-S.8 exhibits that one-third of respondents reported open drainage system for household water disposal (33.1 percent), whereas two-third HH mentioned that it is left open in the streets as there was no drainage system in place. Every eighth households also reported stagnant water in the area (12.7 percent), which could lead to serious health concerns.

In KPK, highest proportion of open drainage is reported (68 percent) followed by Sindh (22 percent). Similarly, 28 percent of households in Balochistan reported stagnant water and lowest recorded for Punjab (2.9 percent). In Districts Mardan and Peshawar, more than 80 percent responded open drainage system in the area (Details at Annexed Table 4.16).

Table-S.8: Sanitary Condition in the Villages

Region	Sanitary Conditions of the Village Street							Number
	Open gutters without covers	Open drainage	Covered drainage	Left the waste in the street	No drainage	Stagnant rain water	Others	
Total	21.1	33.1	4.1	27.1	35.7	12.7	1.1	4495
Punjab	19.4	16.4	1.1	42.8	40.6	2.9	.4	1327
Sindh	21.7	21.5	.8	23.0	50.4	9.8	3.5	1328
KPK	9.8	67.8	10.9	19.8	20.8	19.4		1310
Balochistan	52.3	17.9	3.0	16.0	23.4	27.5		530

Household Waste Disposal

The place where domestic household waste is being dispose off reflects the hygienic practices of the people in the area. This is an important indicator to determine the hygienic status of the individuals living in the area. Table-S.9 explains the place where households usually disposed off their domestic waste.

Table-S.9 elaborates that more than 95 percent of households throw their domestic waste in the open fields (including 14 percent in the backyard), which also leads to environmental hazards. Within the Regions, almost similar pattern has emerged. This situation is worse in Districts Bahawalpur, Jacobabad, Kamber Shah Dad Kot, Naseerabad where almost every households such practiced for domestic waste causing environmental hazards (Details at Annexed Table 4.14).

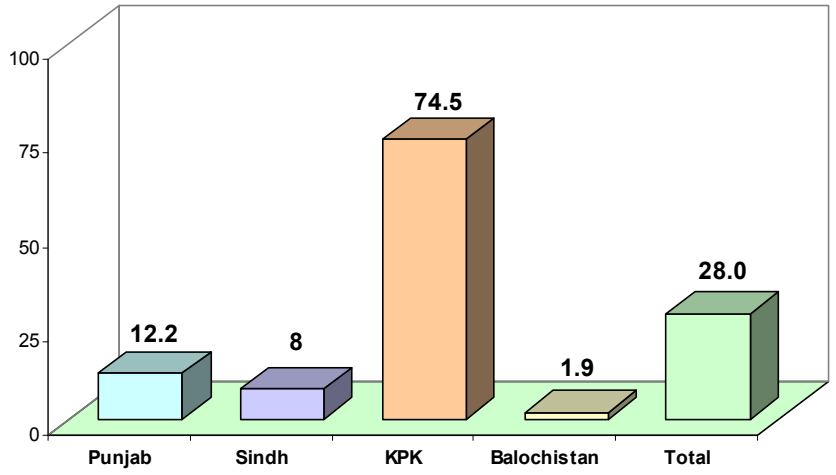
Table-S.9: Household Waste Disposal

Region/Districts	Place where HH wastes usually disposed off							Total	
	Throw in the backyard	Throw in open spaces	Drop it into some backyard/open field	Burying in some ground	Environmental hazards	Others	Don't Know	Percent	Number
Total	14.1	66.9	15.8	.8	.6	.7	1.1	100.0	4495
Punjab	6.5	79.2	13.2			.1	1.1	100.0	1327
Sindh	18.1	72.1	6.6	1.0	.2	.1	2.0	100.0	1328
KPK	22.1	38.6	33.4	1.6	1.8	2.2	.3	100.0	1310
Balochistan	4.0	93.0	2.1				.9	100.0	530

Waste Water Drainage

Similar to the household waste disposal, household waste water drainage also indicates the sanitary practice of the people in the area. Figure S.11 describes that more than one-fourth households have drains for water waste (28 percent) and slightly less than three-fourth of households usually drain it out in open space or field. In KPK, almost three in four households have proper drains for water waste (74.5 percent) while the Districts of Balochistan have lowest proportion (1.9 percent) of drains for water waste followed by Sindh (8.0 percent). Among Districts, the surveyed rural areas of Peshawar stood first where drains for waste water were available (92.4 percent) followed by Mardan (78.9 percent) and Haripur (77.4 percent). (Details at Annexed Table 4.15).

Figure S.11: Waste Water Drainage



Measures against Mosquitoes

Adoption of safety measure against mosquitoes is important factor for prevention of malaria among people. Table-S.10 presents the percentage of households adopting measures against mosquitoes. It is noticeable that less than three-fourth of the households had never taken any measure against mosquitoes (73.5 percent) whereas one in six households either used mosquito net or coil to prevent mosquitoes (17.2 percent). As expected, Balochistan ranks highest where more than 93 percent households were not taking any measure against mosquitoes, followed by Punjab (76.3 percent). In Sindh, one-third took different preventive measures against mosquitoes (30.5 percent). It is appealing to note, more than 74 percent households in district Peshawar and Kamber Shah Dad Kot were taking precautionary steps against mosquitoes (Details at Annexed Table 4.18).

Table-S.10: Measures against Mosquitoes

Region	Measures taken against mosquitoes						Number
	No measures	Use mosquito nets	coil/ insecticide spray	Cleaned stagnant water	Creams/liquid repellent	Others	
Total	73.9	9.6	7.6	1.2	3.7	8.7	4495
Punjab	76.3	.5	.8	.1	.5	24.3	1327
Sindh	69.5	23.6	5.8	2.1	2.0	1.5	1328
KPK	68.2	7.6	18.7	1.8	9.9	3.3	1310
Balochistan	93.4	1.9	1.9	.6	.6	1.5	530

Perception about Waste as a Problem

Perception of people about the waste problems and poor sanitary condition in the area reflect their attitude toward good healthy life. Table-S.11 portrays people attitude toward health. It shows almost nine in ten households recognized that waste was a problem of the area. More than three-fourth reported the bad smell caused by waste followed by "causes mosquito menace" (33.4 percent) and almost similar trend emerged across Regions where people realized the waste as a problem (Details at Annexed Table 4.17).

Table-S.11: Perception about Waste as a Problem

Region	Waste is a problem of the area								Number
	No problem	Bad smell	Clogging of canals	Makes the village dirty	Causes mosquito menace	Causes stray dog menace	Pollutes water sources	Others	
Total	10.5	74.5	10.2	28.3	33.4	16.6	10.7	.4	4495
Punjab	14.0	69.6	2.6	23.8	30.1	9.4	2.0	.2	1327
Sindh	7.4	78.1	17.1	35.7	35.9	20.7	16.5	.7	1328
KPK	13.4	69.8	10.8	19.8	36.0	21.6	15.1	.4	1310
Balochistan	2.8	89.6	10.4	42.5	28.9	12.3	7.5	--	530

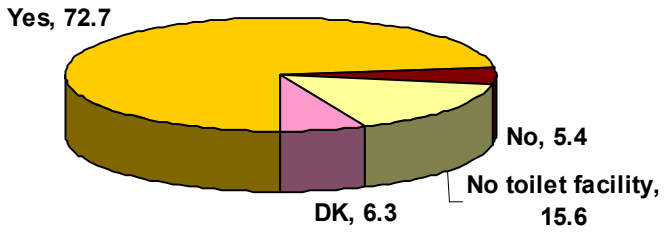
3.3.7 Sanitation Practices in Schools

Availability and Use of School Latrines

Data indicates that only four in ten households send their children to schools (Details at Annexed Table 6.11). When asked "do your children use school's latrine" from those who send their children to the school, more than 73 percent replied affirmative (Figure S.12). More than one-sixth

households reported that there was no toilet facility available in the schools (Details at Annexed Table 6.11).

Figure S.12: Children use School's Toilet



Availability of Hand Washing Facilities in School Toilets

More than two-third reported the availability of hand-washing facility in the schools toilets (Figure S.13). In KPK, about 87 percent of household reported that the hand-washing facility was available in the schools followed by Sindh where 52 percent households replied positively. In Districts Charsada, Nowshera, Mardan, Peshawar and Muzzaffargarh, more than 80 percent of the rural surveyed households reported the accessibility of hand-washing facility in the school (Details at Annexed Table 6.12).

Figure S.13: Availability of Hand Washing Facility in the School Toilets

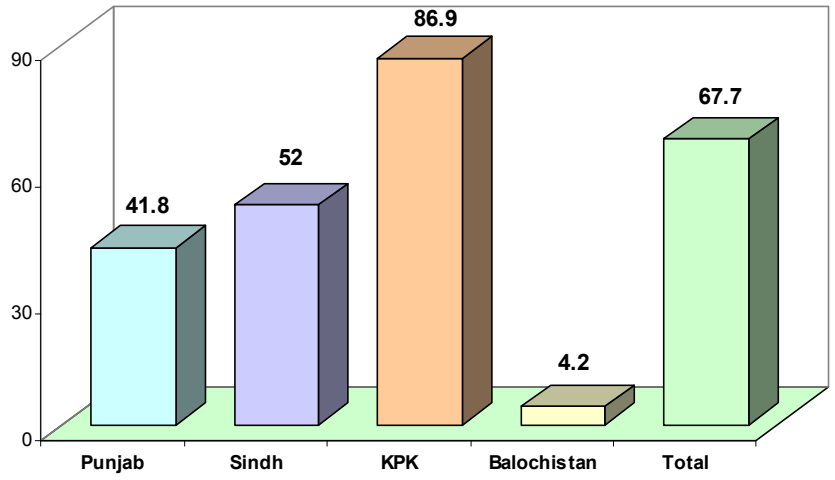


Table-S.12 specifies cleaning agents being used for hand-washing in the schools. It presents that 87 percent were using only water for hand-washing purposes followed by only seven percent using water with soap. The proportion of using only water varies from 68 percent in Punjab to 94 percent in KPK whereas among Districts, Jacobabad and Kashmore were found highest to report the use of soap as the agent for hand-washing (more than 20 percent). (Details at Annexed Table 6.12).

Table-S.12: Cleaning Agent used for Hand Washing in Schools

Region	Cleaning agent used for hand washing in the schools						Total	
	Only Water	Ash	Soap	Nothing	Others	Don't Know	Percent	Number
Total	87.1	.4	7.1	2.6	.3	2.4	100.0	980
Punjab	67.7	--	23.6	1.6	--	7.1	100.0	127
Sindh	77.1	1.1	15.1	1.7	.6	4.5	100.0	179
KPK	93.5	.3	1.9	3.0	.3	1.0	100.0	673
Balochistan	100.0	--	--	--	--	--	100.0	1

Person Cleaning School Latrines

More than four in ten households reported that sweeper was responsible for cleaning the school latrines. Almost half of households replied that either “don’t know” (36.5 percent) or “no one cleans the school latrine” (11.6 percent) (Table-S.13). It is crucial to note that one in ten households reported that students are cleaning the school latrines (8.0 percent); households in Balochistan reported the maximum proportion where children used to clean the school latrines (24 percent) (Details at Annexed Table 6.13).

Table-S.13: Person Cleaning School Latrines

Regions	No Body	Sweeper	Children	Don't Know	Total	
					Percent	Number
Total	11.6	43.9	8.0	36.5	100.0	1420
Punjab	9.4	21.5	3.5	65.6	100.0	288
Sindh	15.9	34.2	11.8	38.1	100.0	339
KPK	10.0	57.6	7.5	24.9	100.0	772
Balochistan	33.3	4.8	23.8	38.1	100.0	21

CHAPTER: 3-4

HYGIENE

3.4.1 Hand-Washing

Knowledge about Hand-Washing Technique and Water Scarcity

The availability of water has a direct link with the improved hygienic condition of individuals. Figure H.1 reflects the level of knowledge about hand washing techniques and water scarcity among the surveyed communities. It shows that four in ten households ever heard about correct hand-washing techniques; this certainly reflects their perceived knowledge. It is a matter of concern that if 60 percent never heard about hand-washing technique how could they practice correct washing. KPK depicts better position among other Regions, as 65 percent of households heard about hand-washing techniques and worst picture was observed in Punjab (38 percent). In Districts Hyderabad, Jacobabad, Mardan and Peshawar, more than 80 percent had ever heard about hand-washing techniques (Details at Annexed Table 5.4).

Figure H.1: Knowledge about Hand Washing Techniques and Water Scarcity

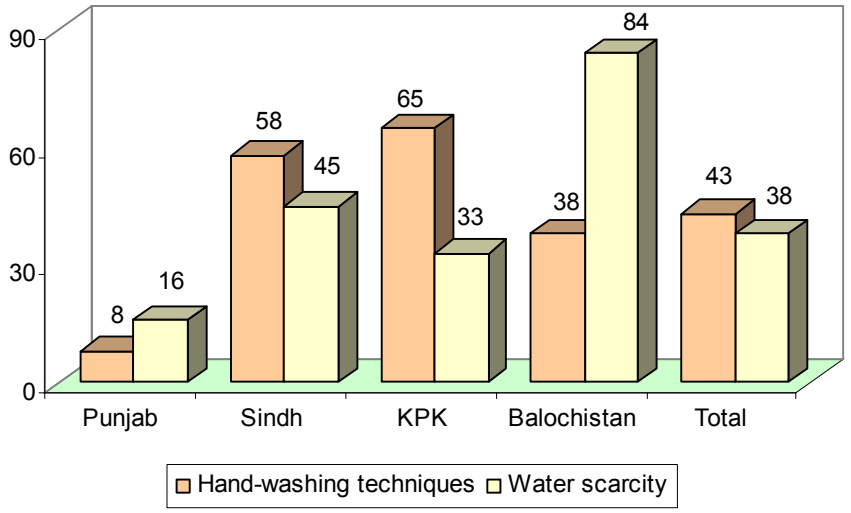


Figure H.1 further elicits the situation of knowledge about water scarcity. It displays that 38 percent household knew about water scarcity. The households in Balochistan (83.6 percent) were more familiar about "water scarcity" as compared to people from Sindh and KPK (45.2 percent and 32.7 percent, respectively). Among those who heard about water scarcity, were asked about types of

water scarcity; data reveals that more than 85 percent mentioned drinking water scarcity while 14 percent associated it to water for household use (Details at Annexed Table 5.4).

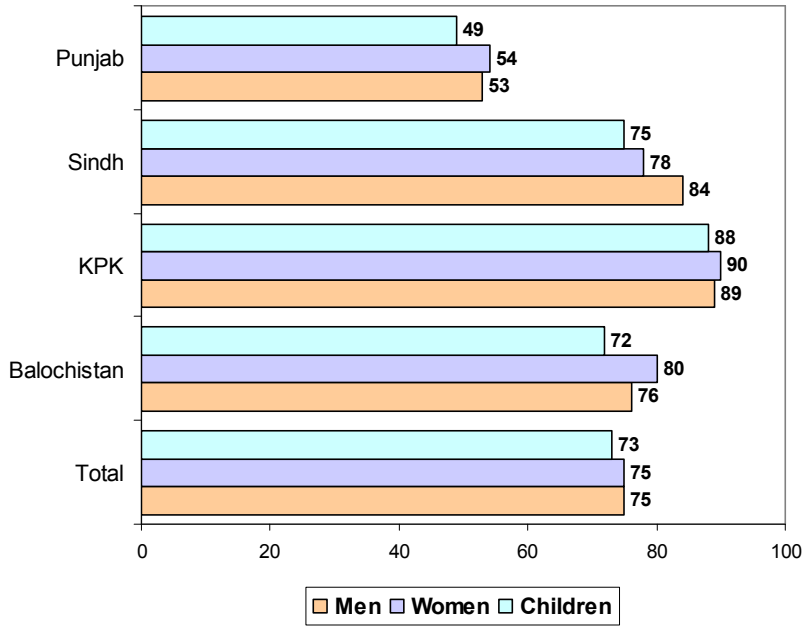
Hand Washing Practices

Hand washing practice is an important part of Hygiene. People can prevent many diseases especially the digestive track diseases, just by washing their hands properly and regularly. Although, it is important to wash hands frequently, it becomes more important to do so before and after some specific activities like before eating/ cooking and after defecation. Numbers of questions were asked to know the hand-washing practices among men, women and children in the sampled villages. Figure H.2 shows the habit of hand-washing practices of men, women and children, reflecting their attitude towards self cleanliness.

Before Eating:

Figure H.2 exhibits that around eight in ten women in the households wash their hands regularly before eating (75.2 percent), in contrast to men (74.6 percent) and children (73 percent). Across Regions, Sindh and KPK have higher proportion (94 percent) in contrast to Balochistan and Punjab (76.4 and 71.2 percent, respectively). Considerable differentials have been observed among men and children across Regions where men practices vary from 90 percent in KPK to 54 percent in Punjab. Similarly, the reported children practices vary from 88 percent in KPK to 49 percent in Punjab (Details at Annexed Table 5.1).

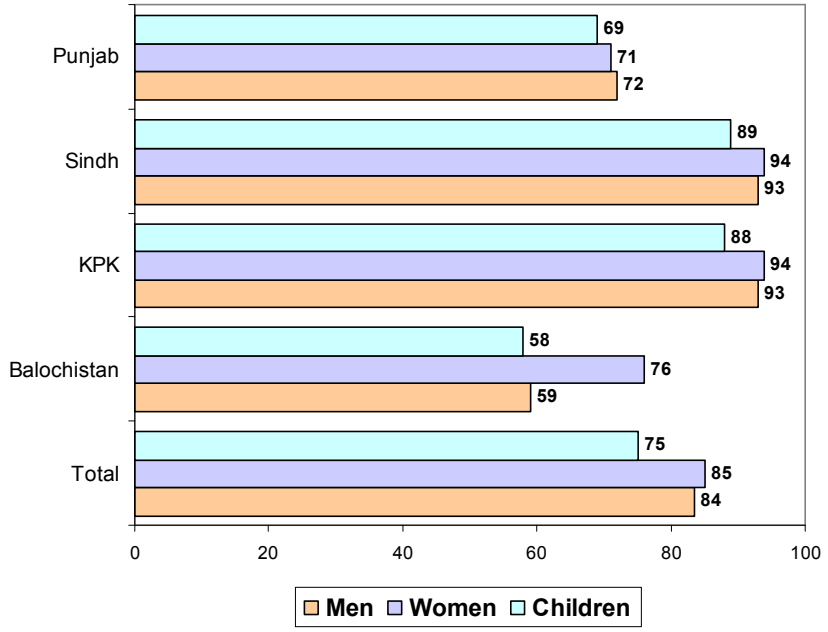
Figure H.2: Hand Washing Practices: Before Eating



After Defecation

Figure H.3 depicts better position of hand washing after defecation than for before eating. 85 percent of women regularly wash their hands after defecation as compared to 84 percent men and 75 percent children. Regional trends follow the pattern of hand washing practices before eating (Details at Annexed Table 5.1).

Figure H.3: Hand-washing practices: After defecation

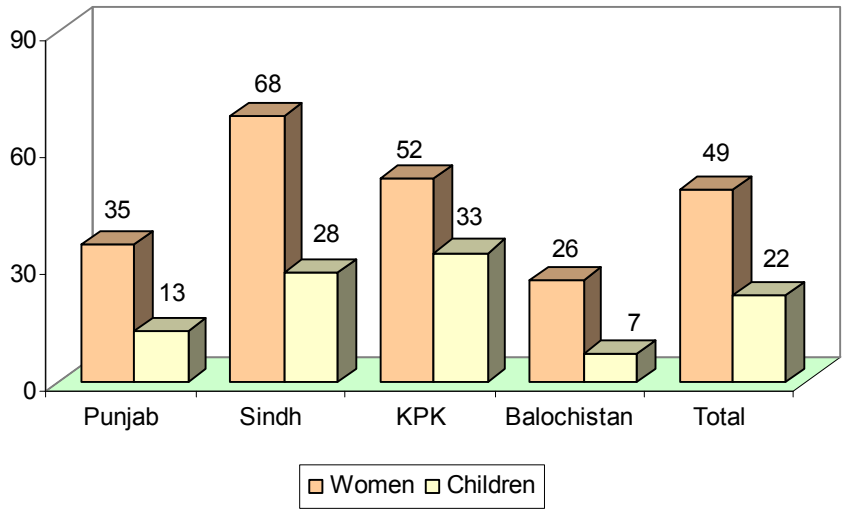


3.4.2 Oral Hygiene Practices among Women and Children

One of vital indicators of personal hygiene is daily cleaning of teeth, at least once a day. This study describes also the practice of cleaning teeth both for women and children. It was observed that 49 percent women regularly used tooth brush/ Miswak (Figure H.4). Among Regions, highest proportion of women cleaning teeth was observed in Sindh (68 percent), followed by KPK (52 percent) and lowest in Balochistan (26 percent). In Districts, Mardan, Jaffarabad, Rajan Pur and Rahim Yar Khan, less than one-fourth of women used Miswak/tooth brush (Details at Annexed Table 5.6a).

Figure H.4 further illustrates practice of teeth cleaning among children in the household. It depicts that one in five children clean their teeth daily (22 percent) and 43 percent occasionally. This proportion varies from 33 in KPK to 6.8 in Balochistan. Higher proportions were in Districts Nowshera (65.7 percent), Jacobabad (41.7 percent), Kashmore (38.7 percent) and Charsada (35.5 percent) (Details at Annexed Table 5.6b).

Figure H.4: Miswak/ Tooth Brush Usage



3.4.3 Skin Care Practices/ Frequency of Taking Bath

The frequency of taking bath shows self health care norms. A question was asked about the frequency of taking bath among females in their routine life. Table-H.1 reflects the frequency of taking bath; it shows that almost every women take bath every day (including 25.1 percent taking twice a day). Similar trends emerged across Regions except slight less proportion (95 percent) observed in KPK (Details at Annexed Table 5.2).

Table-H.1: Frequency of Taking Bath

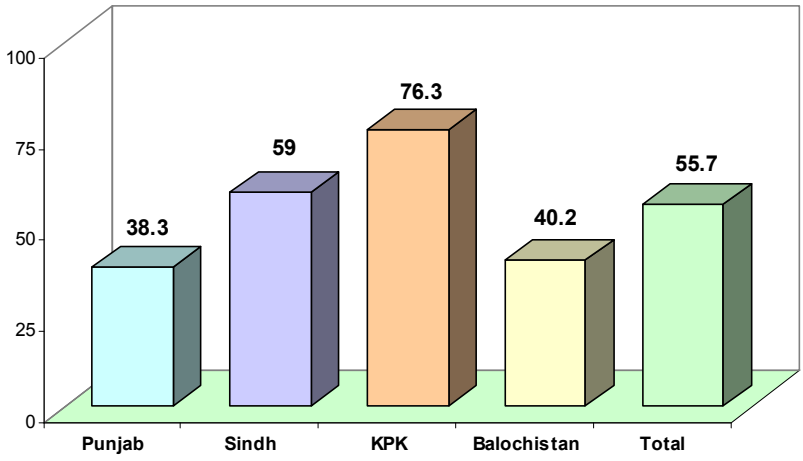
Region	Once a day	Twice a day	Once a week	More than a week	Others	Total	
						Percent	Number
Total	72.7	25.1	1.9	.1	.2	100.0	4467
Punjab	83.1	15.7	1.2			100.0	1316
Sindh	58.4	40.8	.3	.1	.4	100.0	1314
KPK	70.2	24.4	4.7	.4	.4	100.0	1309
Balochistan	88.3	11.0	.8			100.0	528

3.4.4 Foot Hygiene

Shoes wearing habits depict healthcare attitudes. Figure H.5 shows the shoes wearing habits of women and children in the households. It was reported that nearly 56 percent of households (including women and children) wear shoes regularly. However, in Balochistan peoples mostly do not wear shoes (38 percent) against KPK where almost eight in ten wear shoes (76.3 percent). More than 80 percent people of households wear shoes in Districts Nowshera, Charsada, Mardan, Haripur and Sukkur (Details at Annexed Table 5.5). It may be highlighted here that the people not wearing

shoes to cover their feet might come in contact with feces and garbage etc. in the fields/ streets of bad sanitation areas and thus they are more prone to contract different diseases.

Figure H.5: Shoe Wearing Practices among Households



CHAPTER: 3-5

COMMUNITY

3.5.1 Introduction:

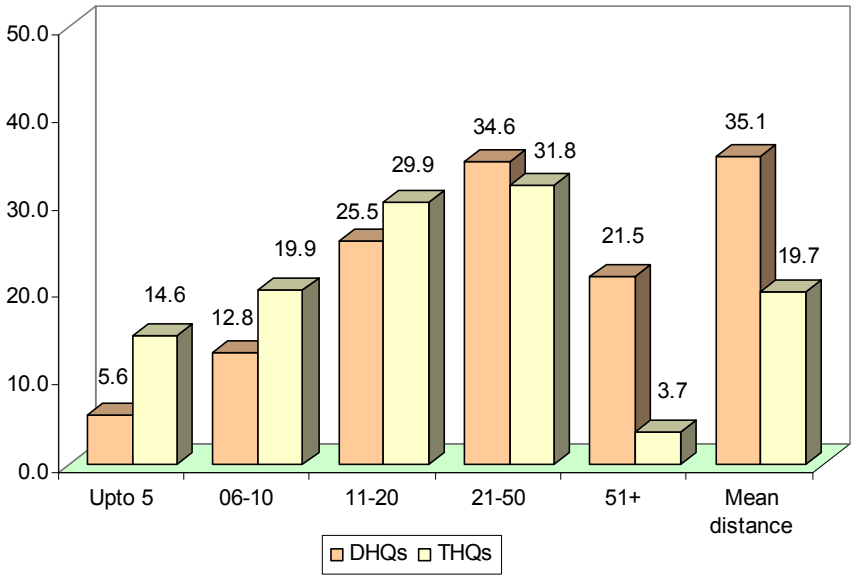
The study used a Community Questionnaire also, to assess the availability and status of general and WASH-related facilities at the village-level. It was administered in all sampled flood affected villages of selected 17 Districts. It included questions about the availability of various public services such as schools, roads, transports and health facilities. This tool also covered the existing water and sanitation facilities, hygiene practices and general knowledge about WASH. The data was collected from a group of community key informants like Teachers, Landlords (Chaudhary), Councilor/ Nazims, Religious Leaders and Political persons etc.

3.5.2 General Information about the Surveyed Communities

Distance from DHQs/THQs

Number of questions were asked in the Community Questionnaire to examine the distance of village from main health facilities like District Head Quarters (DHQs) and Tehsil Head Quarters (THQs). The average distance of DHQs from the village was reported 35.1 Km in contrast to 19.7 Km distance of THQs from the villages (Figure C.1).

Figure C.1: Distance of Communities from DHQs and THQs (In Km)

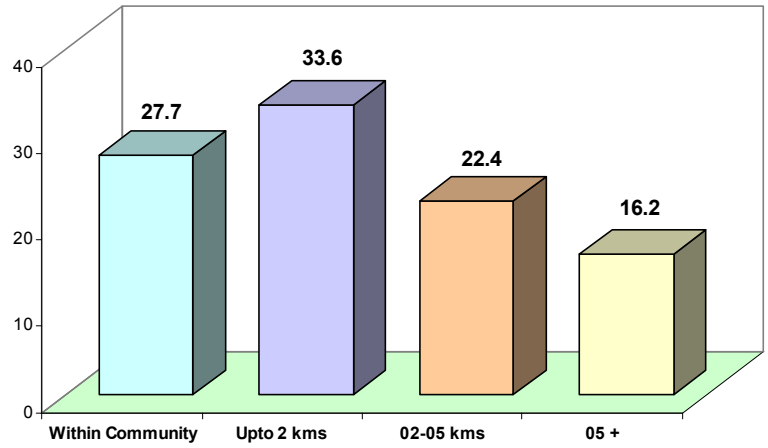


Among Regions, average distance of DHQs from the villages, was observed highest in the villages of Punjab (59 Km) while lowest noted in KPK (17 Km). However, the distance of THQs from the villages reported maximum again in Punjab (30 Km) followed by Sindh (22 Km) and lowest in KPK (10 Km). (Details at Annexed Table C1 & C2).

Distance of the Communities from Main Road

Distance from main road is vital to know because it reveals the accessibility of the community. Figure C.2 illustrate the distance of main road from the villages. It shows that more than one-fourth of villages have main road within the community and only one in 6 villages had main road 5+ Km away from the village. Amongst Regions, the proportion of having main road within the community varies from 19 percent in Punjab to 33 percent in KPK.

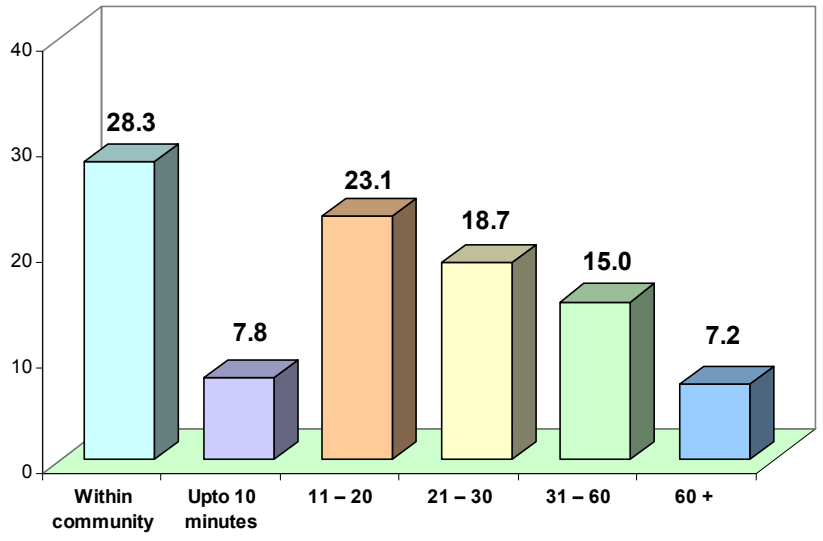
Figure C.2: Distance of Sampled Communities from Main Road



Time/ Transport required to Reach the Main Road

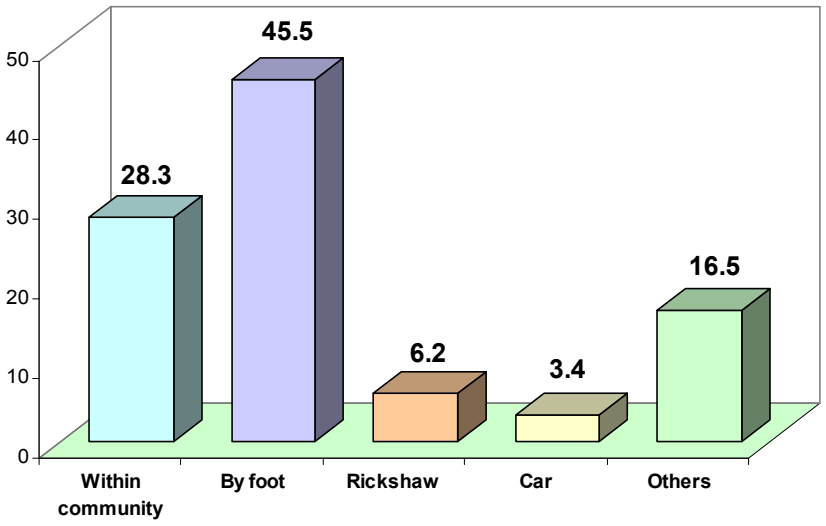
The information about the time and type of transport required by the community people to reach the nearest main road was also gathered in the study. Figure C.3 shows that around 88 percent people reach the nearest main road within 30 minutes. A considerable differential has been observed across Regions and Districts. (Details at Annexed Table C.4).

Figure C.3: Time required for Sampled Communities for Reaching Main Road



Nevertheless, it has been observed that only 26 percent of villages used some means of transport while almost every second villages travel "on foot" to reach the nearest road. Again clear differential has been observed across Regions. (Details at Annexed Table C.5).

Figure C.4: Type of transport usually used to reach main road from Communities

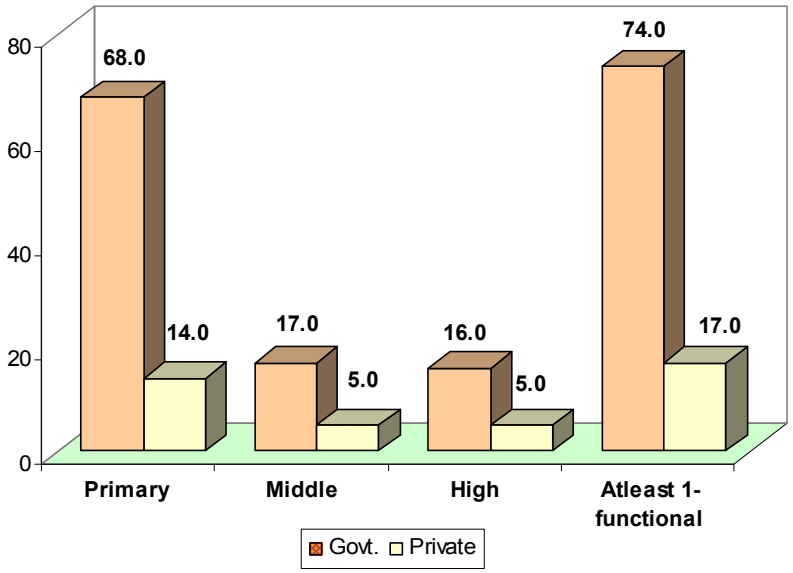


Availability of the Public and Private Sector Schools for Boys and Girls

The presence of schools (boys & girls) in the communities/ villages plays an essential role to educate community. In this study, different questions were asked to judge the presence of functional schools established by the public or private sectors.

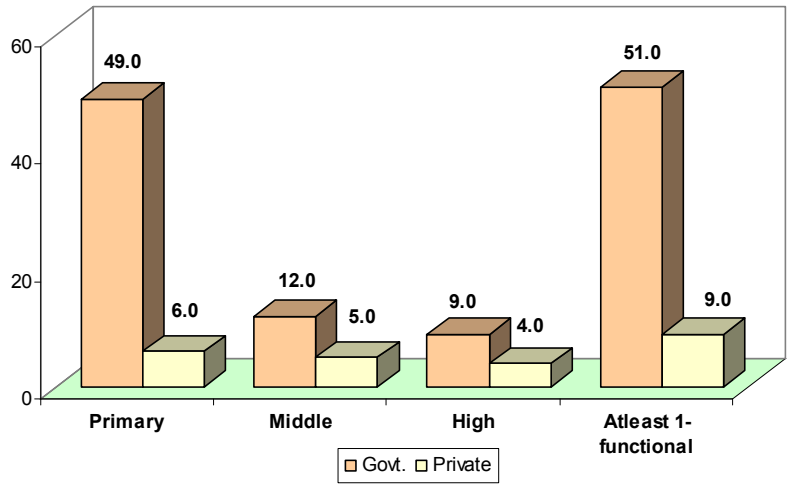
According to Figure C.5 and C.6, it is seen that at overall level, 68 percent communities have boys' primary schools, 17 percent have middle and 16 percent villagers have higher schools established by the Public sector whereas contribution in establishing these schools by the private sector is much lower. More than four-fifth (82 percent) communities reported to have boys' primary, middle (22 percent) and high (21 percent) schools. (Details at Annexed Table C.5).

Figure C.5: Availability of Functional Boys Schools in the Community by Type of Schools



Overall, girls' primary schools are found in 49 percent villages, middle schools are situated in 12 percent of the rural areas and only 9 percent communities have higher schools facility for girls established by the Public sector while private sector interested in primary girls schools in 6 percent rural communities only 5 percent villages have private middle and 4 percent have higher schools for girls. It shows sub-optimal contribution by private sector than expected. (Details at Annexed Table C.6).

Figure C6: Availability of Functional Girls Schools in the Community by Type of Schools



Regional data exhibits that the presence of primary schools in the sampled communities is highest in KPK (71 percent) followed by Punjab (49 percent), Sindh (38 percent) and Balochistan (18 percent). At District level availability of Public sector primary schools (boys and girls) are higher as compared to middle and high schools. The similar trend is observed among the availability of private schools. (Details at Annexed Table C.7).

3.5.3 KAP on WASH at Community Level

Availability of the Municipal Water Facility

Water Supply System should be one of the basic facilities available in a community area. BLS obtained data on availability of any water facility like hand pumps, filtration plants and pipeline available in the selected areas. Table C.1 shows that less than one-third (30 percent) of the communities have municipal water facility. Water is supplied through pipeline to 11 percent communities while 13 percent communities get water from hand pumps and filtration plants are not common in sampled areas. (Details at Annexed Table C.8).

Municipal water pipeline is more commonly found in KPK (36 percent) while hand pumps are usually available in two-fifth areas of KPK and less than one-tenth villages of Balochistan. Around two-thrid of villages in Haripur have municipal water facility, one-third of villages of Charsada, Mardan and Nowshera have the municipal water facility.

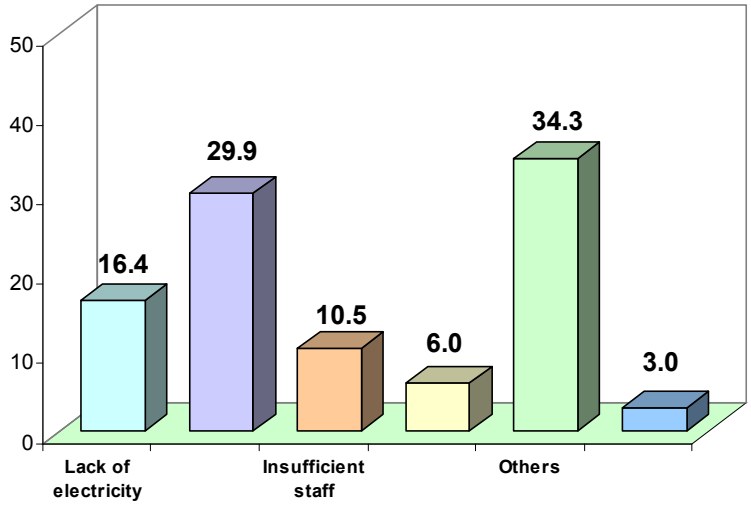
Table-C.1: Availability of the Municipal Water Facility

Region/Districts	Water Hand Pump				Filtration plant		Water pipeline		At least one Municipal water facility	
	None	1	02 - 05	06 - 10	None	02– 05	None	1	Percentage	Number
Total	86.6	2.5	10.3	.6	99.7	.3	88.8	11.2	20.9	321
Punjab	100.0				100.0		100.0		.0	94
Sindh	98.9		1.1		100.0		100.0		1.1	95
KPK	59.6	8.5	30.9	1.1	98.9	1.1	63.8	36.2	63.8	94
Balochistan	89.5		7.9	2.6	100.0		94.7	5.3	15.8	38

Frequency of Water Supply from Municipal Water Source:

Figure C.7 provides the frequency of water supply and findings show that overall, water is supplied twice a day to 16.4 percent community through public sources while 30 percent enjoy the facility once a day. (Details at Annexed Table C.9).

Figure C.7: Frequency of Water supply in the Community



Hygienic Conditions around Municipal Water Supply Sources:

Table C.2 provides information about the hygienic conditions of places where municipal water sources are located. According to the available data, more than two-fifth (40.3 percent) of the communities have their water sources away from the populated areas. Almost half (45 percent communities are found satisfied with the hygienic conditions as their water sources are situated at separate clean places and slightly more than one-tenth (10.4 percent) have stagnant water around the water facility. (Details at Annexed Table C2.4).

Regional data presents that four in ten of the communities have their water facility away from the main population/areas. In KPK, almost half of communities having separate clean places in contrast to Balochistan where one-third reported the same. In Punjab no community reported any municipal water supply in the community.

Among Districts, the situation is encouraging for Haripur, Nowshera and Peshawar where more than 70 percent communities have water facility at separate clean places. Study reveals that in Mardan, 80 percent communities reported water sources are more likely located far away from the population.

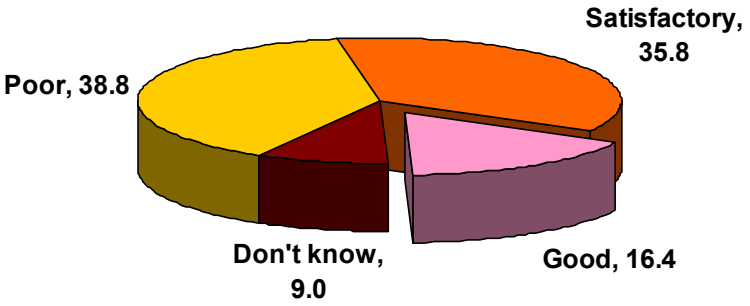
Table-C.2: Hygienic Conditions around Municipal Water Supply Source

Region	Hygienic Conditions around the Water Supply Sources				Number
	Separate clean places	Stagnant water around Source	Far away from population	Others	
Total	44.8	10.4	40.3	4.5	67
Sindh			100.0		1
KPK	46.7	10.0	38.3	5.0	60
Balochistan	33.3	16.7	50.0		6

Maintenance Level of Municipal Water Facilities

Figure C.8 reveals the maintenance level of municipal water facilities situated in the surveyed communities. The results show that around two-fifth (39 percent) communities mentioned that maintenance of municipal water facility is 'poor'. (Details at Annexed Table C.11).

Figure C.8: Maintenance level of water sources available in the Community



Problems Associated with Maintenance of Drinking Water Supply Sources:

In order to observe the problems related to Public drinking water facilities, information was collected. Table C.3 reveals that the main problem is 'no maintenance' of Public water facility as the high percentage (52.2 percent) and in this context, more than one-forth (27 percent) of the communities mentioned about lack of electricity (21 percent) followed by lack of staff and

insufficient staff (13.5 percent) while around 12 percent communities have no problem with their water supply system. (Details at Annexed Table C.12).

Table-C.3: Main Problems associated with Maintenance of Drinking Water Supply Source

Region	Major Problems for Maintenance of Public Drinking Water Sources						Number
	Lack of electricity	Lack of staff	Inefficient staff	No maintenance	No problem	Don't know	
Total	20.9	6.0	7.5	52.2	11.9	14.9	67
Sindh						100.0	1
KPK	23.3	6.7	8.3	53.3	10.0	13.3	60
Balochistan				50.0	33.3	16.7	6

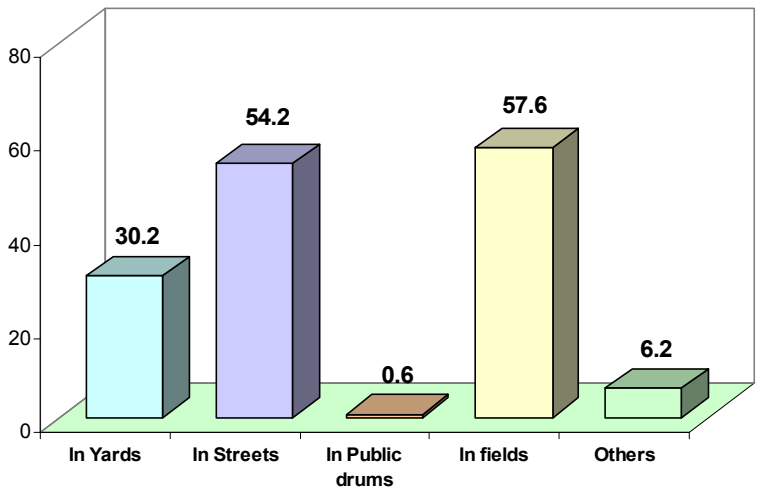
Household Waste Disposal

To assess attitude and practices of the communities about the importance of healthy environment benefits for them, they were asked about where they disposed off their household waste.

Overall, nearly three-fifth (57.6 percent) of the sampled communities disposed-off household waste in the open field followed by streets (54 percent) and yards (30 percent) while only a meager percentage (0.6 percent) use public drums for this purpose (Figure C.9). Region-wise, more than two-third of the sampled communities in Sindh and Punjab threw household waste in fields followed by Balochistan (53 percent). (Details at Annexed Table C.13).

Large variations are found in the disposal of household waste at Districts level where 100 percent sampled community of Naseerabad use 'field' followed by of Jaffarabad (95 percent) which threw households waste in yards.

Figure C.9: Places for Household Waste Disposal

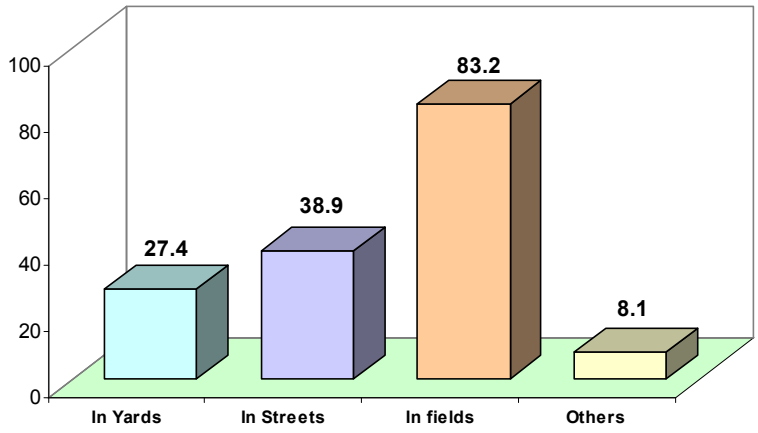


Animal Waste Disposal

Generally, animal waste could be useful if it is used in the agriculture land or could be strongly dangerous for environmental condition if it is not disposed-off properly.

More than four-fifth (83 percent) of sampled communities disposed-off animal excrete in the fields and more than three-fifth throw it in the streets and yards (Figure C.10). Similar pattern observed for disposal of animal waste across regions while in Balochistan yards are mostly used for this purpose. At District level, almost all the communities of Bahawalpur, Muzzaffargarh, Rajan Pur and Haripur use animal waste for agriculture purpose. (Details at Annexed Table C.14).

Figure C.10: Places where people throw Animal waste

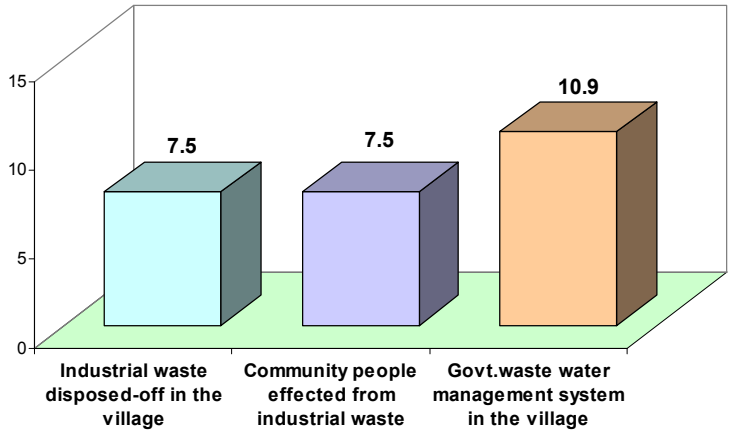


Environmental Hazards of Industrial Waste:

The following figure C.11 shows that overall, a small proportion (7.5 percent) of communities are affected by the industrial waste. The poorest situation regarding environmental hassles has been observed for Balochistan where industrial wastes are being disposed-off in the communities and their people are being affected from it. Waste water management system is established in around one-third of the communities which is visible in KPK only. (Details at Annexed Table C.15).

Among Districts, industrial waste is being disposed-off in all communities of Hyderabad. It is found that 68 percent communities of Charsada followed by 37 percent communities of Haripur are found to have Water Waste Management System (WWMS) by the Government.

Figure C.11: Environmental Hazards of Industrial Waste



Public Latrines for Women and Men

Overall, Data presents poorest situation of existence of public latrines where two percent public latrines available for females and slightly more than two percent for males in the sampled communities. It is found that there are only three percent of communities where public latrines available. The similar pattern is observed at Regional and District level except in district Kashmore, where more than one-third of communities reported having at least one public latrine. (Details at Annexed Table C.16).

Availability and Hygienic Condition of School Latrines

Overall, it is found (Table C.4) that in 35 percent communities schools have no latrine facility and 33 percent communities complained that schools' latrines are dirty. Five percent communities reported that school latrines have no water facility and a small percentage mentioned that latrines doors are not available as compared to 10 percent of the respondents of sampled communities who mentioned that the available schools latrines are well maintained. (Details at Annexed Table C.17).

Regionally, 95 percent communities of Balochistan do not have the latrine facility in their schools followed by Sindh (49.5 percent), KPK (16 percent) and Punjab (14 percent). More than half of the communities of KPK complained about the dirty condition of the school latrines while about two-fifth communities of Punjab and one-fifth in Sindh expressed that they are facing similar problem. A small number of communities reported about non-availability of water and latrines doors in schools of all Regions.

The same trend has been observed in all selected Districts for categories like 'schools latrines not available', 'dirty conditions' and so on.

Table-C.4: Availability and Hygienic Condition of School Latrines

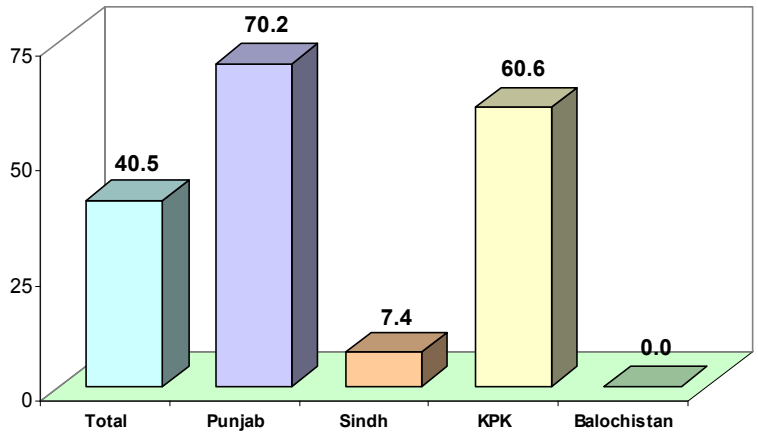
Region	Condition of Schools Latrines						Total	
	Not Available	Dirty Condition	No Water Facility	Latrines Without Doors	Well Maintained	Others	Percent	Number
Total	34.6	33.0	5.0	2.2	10.0	15.3	100.0	321
Punjab	13.8	38.3	2.1	4.3	16.0	25.5	100.0	94
Sindh	49.5	21.1	7.4	3.2	4.2	14.7	100.0	95
KPK	16.0	53.2	6.4		13.8	10.6	100.0	94
Balochistan	94.7		2.6			2.6	100.0	38

Availability of Hand Washing Facilities at Schools

Overall, 40.5 percent sampled communities reported hand washing facility in schools. Of those, 94 percent use water for hand-washing, while only six percent communities reported that cleaning agent like, ash/mud is being used for hand washing in schools. (Figure C.12).

Among the different Regions, better condition has been seen in Punjab (70.2 percent) and KPK where 60.6 percent areas have hand-washing facility in schools followed by Sindh (7.4 percent). Majority of the communities use simple water for hand washing in schools which might not enough for ensuring disease prevention however, some of sampled communities of Punjab and Sindh mentioned soap as cleaning agent for hand washing in schools. (Details at Annexed Table C.18).

Figure C.12: Hand Washing facilities at Schools



Source of Information about Water & Sanitation:

Overall, results (Table C.5) show that nearly 42 percent communities have been receiving information about water and sanitation from village committees/NGOs and 17 percent from Media (Electric and Print) followed by local influential (14 percent), participatory meetings (9 percent),

meetings arranged by development authorities (8 percent), other people (7 percent) and friends (6 percent). Most of the Bloch communities reported village committee/NGOs as their main source of information while in more than one-third of KPK and Sindh communities reported the same. Furthermore, Sindh communities also reported media as the source of information. (Details at Annexed Table C.19).

At District level, majority of communities of Naseerabad, Nowshera, Charsada, Kamber Shah Dad Kot and Rajan Pur were informed by the village committees about water and sanitation. Information provided by the other sources varies in selected Districts.

Table-C.5: Information Source about Water & Sanitation

Region	Source of information about Water and Sanitation										Number
	Participatory rural meetings	Village committee/ NGO	Local influential people	Satisfied acceptors	Friends	Neighbors	Other people	Electronic/print media	Local meetings by development authorities	None	
Total	9.7	33.3	16.5	1.6	12.1	10.0	14.3	15.6	5.6	32.1	321
Punjab	2.1	19.1	13.8		14.9	19.1	14.9	19.1	1.1	42.6	94
Sindh	24.2	36.8	22.1	4.2	17.9	13.7	12.6	25.3	13.7	31.6	95
KPK	6.4	31.9	11.7		6.4		19.1	8.5	3.2	28.7	94
Balochistan		63.2	21.1	2.6	5.3	2.6	5.3		2.6	15.8	38

Organizations Working for Water & Sanitation in the Communities

Overall, one-third (33 percent) sampled communities of flood affected areas get benefit of water and sanitation facilities from NGOs followed by Panchayats (11 percent), and Government (6 percent) while half of the communities reported that there is no such type of organization working for them (Table C.6). Similar trend found at Regional and District levels. (Details at Annexed Table C.20).

Table-C.6: Organizations Working for Water & Sanitation

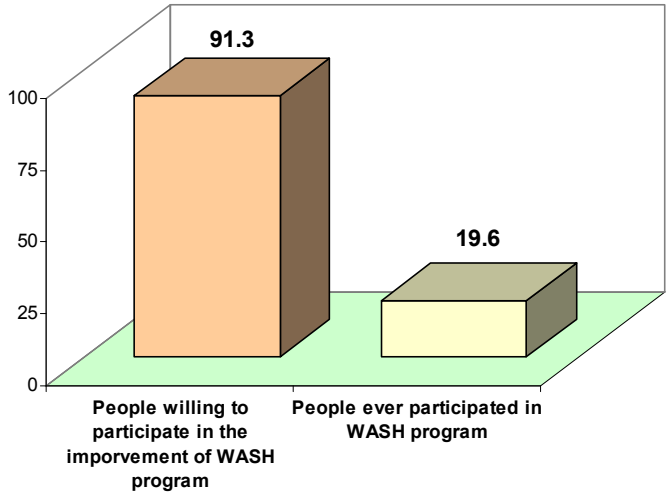
Region	Type of Organization in the Village								Number
	Govt. organization	NGOs	CBOs	Panchayat	Youth clubs	Others	None	Don't know	
Total	4.0	20.9		.3		2.8	69.5	3.1	321
Punjab		3.2				2.1	86.2	8.5	94
Sindh		23.2		1.1		1.1	75.8		95
KPK	13.8	39.4				6.4	40.4	1.1	94
Balochistan		13.2					84.2	2.6	38

Community Participation in Water & Sanitation Programs

Generally, the participation of community people makes a program to run smoothly and successfully. In order to capture this perception, sampled communities were asked about their participation in water & sanitation programs. (The qualitative data indicates that the frequency of programs for raising awareness on water & sanitation is very small, e.g. few NGOs in Punjab and Sindh).

It is important to note that more than one-fifth (20 percent) communities had ever participated in sanitation programs while one-fifth (18 percent) of flood affected areas informed that no such program was organized in their areas (Figure C.13). It is encouraging that nine in ten communities are willing to participate in order to make water sanitation and environmental conditions better within their villages.

Figure C.13: Community Participation in WASH Programs



Region-wise, more than one-third sampled communities of KPK have ever participated in activities of water & sanitation followed by Sindh (18 percent, Punjab (12 percent) and Balochistan (8 percent) while almost all the communities ready to participate to improve water & sanitation conditions of their areas (Table C.7). (Details at Annexed Table C.20)

Table-C.7: Community Participation in Water & Sanitation Programs

Region	People ever participated in water and sanitation program				People participation to Improve water and sanitation condition			Total	
	Yes	No	Don't Know	No program organized	Yes	No	Don't Know	Percent	Number
Total	19.6	59.8	2.8	17.8	91.3	5.3	3.4	100.0	321
Punjab	11.7	74.5	1.1	12.8	91.5	1.1	7.4	100.0	94
Sindh	17.9	64.2	2.1	15.8	92.6	6.3	1.1	100.0	95
KPK	34.0	38.3	6.4	21.3	89.4	7.4	3.2	100.0	94
Balochistan	7.9	65.8		26.3	92.1	7.9		100.0	38

At Districts level, majority of the sampled communalities mentioned that their people have participated in water and sanitation programs while most of them are willing to be involved in water and sanitation activities to improve them at village.

Knowledge about Attributes of a Clean and Healthy Village

Information on perception of the community is important to achieve KAP study objectives. In this study, a question was asked to know attributes & benefits of 'clean and healthy village'.

Overall, the following Table C.8 reveals that 63 percent communities believe that to have a clean and health village, 'every household should have a latrine' followed by 'healthy citizenry' (60 percent), 'clean drinking water availability' (57 percent), 'no mosquitoes' (45 percent), 'waste water not stagnant around' (31 percent), 'no water scattered' (27 percent), 'clean water bodies and clean public places' (22 percent).

At Regional and District level, more commonly reported attributed are availability of latrines in every household used by every individual, clean drinking water, healthy citizenry and no mosquitoes. (Details at Annexed Table C.21)

Table-C.8: Knowledge about Attributes of a Clean and Health Village

Region	Attributes of clean and healthy village															Number
	Every HH owns a latrine	Every individual uses a latrine	No waste scattered	No waste water stagnant	Water bodies are clean	Clean drinking water availability	Market places is clean	Clean public places	Clean sea shore	All institutions are clean	Healthy citizenry	No flies	No mosquitoes	No cow dung heaps	Others	
Total	61.1	25.5	38.3	26.2	16.8	46.1	7.2	12.5	4.4	10.0	52.3	31.8	62.9	20.9	.9	321
Punjab	66.0	34.0	43.6	34.0	25.5	31.9	7.4	11.7	10.6	12.8	35.1	34.0	56.4	14.9	2.1	94
Sindh	92.6	31.6	43.2	21.1	18.9	51.6	6.3	18.9	2.1	11.6	63.2	41.1	68.4	37.9	1.1	95
KPK	16.0	14.9	39.4	33.0	4.3	41.5	6.4	7.4	1.1	3.2	46.8	28.7	64.9	18.1		94
Balochistan	81.6	15.8	10.5	2.6	21.1	78.9	10.5	10.5	2.6	15.8	81.6	10.5	60.5			38

Benefits of a Clean Village

To know the general perception regarding benefits of a clean village a question was asked to receive multiple responses. Overall, nearly 73 percent sampled communities believe that a clean village improves the status of village regarding health attributes and environment, 68 percent believe in cleaning of water bodies followed by 'no waste water stagnant in streets' (59 percent), 'no waste scattered' (49 percent) and 'every one use latrines' (40 percent) (Table C.9). The similar pattern is observed at Regional and Districts level. (Details at Annexed Table C.22)

Table-C.9: Knowledge about Benefits of a Clean Village

Region	Benefits of a Clean Village						Number
	Status of the village improved	Every individual uses a latrine	No waste scattered	No waste water stagnant	Water bodies are clean	Others	
Total	61.7	36.8	52.0	61.7	70.7	.6	321
Punjab	42.6	28.7	39.4	79.8	64.9		94
Sindh	77.9	50.5	61.1	78.9	84.2	2.1	95
KPK	56.4	40.4	42.6	47.9	58.5		94
Balochistan	81.6	13.2	84.2	7.9	81.6		38

CHAPTER: 3-6

FOCUS GROUP DISCUSSIONS & IN-DEPTH INTERVIEWS

BSL (Phase-III) has been conducted in 17 selected Districts affected by floods during 2010 to ascertain the post-flood status on WASH. All the 17 Field Teams, each comprising of one man and one woman were trained during the 03-Days Comprehensive Training Workshop at Islamabad, to collect the qualitative data through 34 Focus Group Discussions (FGDs) and 34 In-Depth Interviews (IDIs) in the 17 Districts during the Months of August-October 2011. The Team members were well versed with the language and cultural aspects of the communities they were working with to collect qualitative data. Similarly, respondents of the FGDs and IDIs were residents of the same village, living there since long time, vocal and well versed with the daily living pattern of the community and could provide correct information about WASH practices in their particular area. Thus, the information received through FGDs and IDIs is area specific.

Separate FGDs/ IDIs of men and women were conducted as per approved guidelines, recorded and transcribed by the Field Teams for sending to NATPOW. Response rate in case of FGDs and IDIs has been 100%.

Focus Group Discussions (FGDs)

Generally the age group of male respondents of the FGDs ranged from 20-60 years and majority was married, doing minor jobs. Their educational attainment was low in many cases, although some had passed middle and matriculation classes. On the other hand, the female respondents were mostly married house wives with ages ranging from 20-50 years.

In majority of cases, the communities were not displaced by floods, however in KPK, for Haripur, it was reported that there was displacement after flood because the houses were damaged and people had to move out; in Sindh at some instances it was reported that even the schools were totally wiped out by floods and the children had to travel to a nearby village to seek education. Further, the FGDs indicate that almost all the communities displaced due to the floods have retuned back to their homes.

Water Source, Quality and Associated Problems

Overall, water from taps, hand pumps, rivers, canals and wells is used for drinking purposes as well as domestic use. The water in rivers and canals becomes muddy during rainy season and sometimes it is polluted due to open defecation practices in the area and the improper disposal of household

wastes. The waste disposal by communities is also a major contributor in polluting the water sources.

No laboratory testing for the quality of water has been reported in any of the FGDs. At some of the surveyed sites, the source dried up or the supply was interrupted.

The Regional data from FGDs highlighted that the reported sources of use of water both for drinking purpose and domestic use is area specific. In Punjab mostly taps are available, while in Sindh, hand pumps are the main source of water along with rivers and canals, whereas in KPK, the main source is pipe line, tube well, stream water and wells although some have reported of having borehole for water, in Balochistan, people use canal (Karez) water. In Balochistan, the canal water is available for 5-6 months and then it dries up and water needs to be brought in from other village.

There has been no case of rain water used for drinking purpose. Rain water has been used in a few instances only for washing clothes. When it rains, the water is collected in buckets or vessels and utilized within one or two days and not stored for longer.

Water Table

In Punjab, water table is reported to be 20-50 feet, in Sindh, it was around 30-50 feet whereas in KP, there has been a range of few feet e.g. 12-15 feet and for Balochistan water has been reported as below as 40-50 ft.

Water Transportation

In all the surveyed communities, women carry the main responsibility of fetching water from outside the house. The distance ranges from few meters to a distance of two kilometers and the time spent in fetching the water has been reported from a few minutes (10-15) to one or more hours, depending upon distance of the source. Mostly aluminum vessels, earthen wears, plastic buckets or coolers are used to carry the drinking as well as domestic use water and these utensils are cleaned daily. In a similar manner the same kind of utensils are used to store water for the domestic and drinking purposes.

Water Storage and Quality at Point of Use

In almost all FGDs, none reported treatment of water by any method; people use it without any purification, although they said that at times when it rains, the water gets muddy, still there is no known way of making it safe for drinking. Only in Sindh, an NGO had been working in flood affected areas and they distributed tablets for purifying the water during last year.

Because of the far off distances, women only bring water that can be carried easily; the usual capacity is 15-20 liters. It is mostly for drinking purpose and the same water is used for other

domestic purposes like cooking and washing utensils. The stored water is useable only for one day; fresh water is again brought for the next day. As far as the issue of cleaning of utensils for drinking and domestic use is concerned, the drinking water utensils are cleaned daily whereas the domestic use utensils are not cleaned so frequently, but on weekly basis or after 3-4 days. Every household has some mechanism to cover water storage facility, lids was the most used practice. In some instances women brought water in open vessels and covered it with plates at home.

It is also reported during FGDs, especially in Punjab and Sindh that drinking water when stored, is kept at a clean and a little bit elevated place so that it is away from mud and dirty water on ground. However, usually it is difficult to keep the place clean because of dirty and waste water close to it.

In all surveyed communities, women were conscious to ensure that the water stored for drinking or cooking purpose, is not spoiled by children but in actual practices children do get access to it and make it impure by putting hands or using a glass or cup to take out water.

Water availability is a real issue of the area as only limited quantity is fetched and stored, and at times it has been reported that the water is utilized within few hours as and when it is brought. Thus, many tasks (washing clothes, bathing) are carried near the stream or river.

Hand Washing

Hand washing was regarded as a good practice and reported as being practiced by the men, women and children, but the important fact lies that whether it is really observed even when they face water shortage. Normally there is no hand washing facility available inside the toilet, but near to it where domestic use water is kept and hands can be washed. Women wash hands after defecation but mostly with water as affording soap was a problem due to poverty. Men and children also wash hands after defecation but mostly with water and children have to be followed to obey and practice all that has been taught to them because they are not so keen about cleanliness. In some schools, water was available for washing hands but no soap.

Bathing is also practiced by men, women and children but it is need based as on Fridays it is religious obligation to take bath but again it is also related with the availability of water and personal hygiene practices.

Defecation Practices

Region wise FGDs indicate that in Punjab, some people practice open defecation but many have latrines in their homes. In Sindh and KPK also, open defecation practice is common but less than Balochistan where mostly open defecation is practiced.

People understand that having a household latrine is a better option compared with open defecation as there is privacy and hygienically it is better that the waste is not left in open, but to deal with it they have to have money which is an issue with these poor rural communities. Those going into fields for open defecation reported that they do not have enough money to construct toilet. People practicing open defecation were not much concerned with covering their faces with dust, ash or anything else.

In all FGDs, the school latrine has been reported as an issue; either there was no latrine or it was not functional mainly because of water non-availability therefore, children were using latrines either in their homes or open defecation was practiced. In schools where latrine was functional, the use of a single facility by a large number was again an issue because cleaning and waste removal was a persisting issue.

Satisfaction over Defecation Practices

People having toilets inside their house are satisfied with their defecation practices however, knowledge about use of flush latrine amongst elders and children is poor. Those who have a latrine inside the HH, do not have enough water for using and cleaning, and those who are doing open defecation are concerned with privacy issues. So the satisfaction level in both cases is limited.

People are aware that open defecation is dangerous for health but they have no other option. Mostly poor families practice open defecation. The feces are not covered in the fields. People have reported that on construction of a new latrine the expenditure will be around 60-70 thousand rupees, which they cannot afford. If finances are provided, they can participate physically. There was hardly any shop in the village where sanitary material was available.

Waste Disposal and Hazards

Generally, there is no proper system of drainage or its maintenance. Toilet waste is drained out into the open space in all most all instances. In some places, the reported practice of toilet disposal is near the river side. The cleaning of toilets is not the regular daily based activity, as water shortage is the main issue, however it is cleaned once a week or when there is a need to do so. The women clean toilets with water. In case of open defecation, fields are used.

In all cases, the household garbage is thrown out in the open area outside the houses .The drain of waste water also goes into the open space outside the HH domain. The sanitary condition of the streets is not good because of dirty stagnant water and garbage wastes. It poses a serious threat to people as they complained about flies and mosquitoes as a result of this practice but no measures have been taken to control them. In a few instances it is either buried under ground or burnt.

Further, there has been no area where an industrial waste was causing any threat to water resources or the community.

The FGDs revealed that at all places the animal waste disposal is done either by use in the field as manure or making dung cakes for fuel purpose. However in few instances it was also shared that the waste is dumped in streets from where it is thrown into the fields.

Access to information is one of the major factors leading to lack of awareness about WASH issues. In a few instances some NGOs gave some information and others referred it through radio. People have reported that because of the improper water and waste disposal there are a number of diseases like diarrhea, malaria, allergies, fever etc., but few can link the waste and disease causation. Most of the respondents have adopted no measures to kill mosquitoes although they expressed their great concern about it. In few instances people used smoke and kerosene oil to kill them. In one instance leaves of Neem tree are used as smoke source to repel and get rid of mosquitoes.

Preferred Source for Receiving Information on WASH

Many people do not have access to TV, radio or print media. Therefore, few have opted radio as the source they would prefer, others have shown interest in interpersonal communication through LHWs or some NGOs and some men were of the view that the loudspeaker at the mosque can be utilized to inform people regarding WASH issues.

Attributes & Benefits of a Clean Village

Most of the rural communities in FGDs highlighted the following attributes and benefits of a clean village:

1. Houses are neat and clean
2. Every house has a latrine
3. There is no waste around
4. Streets and surroundings are clean
5. People are clean and healthy
6. No mosquitoes and flies
7. There is no disease
8. The environment sounds good

In-Depth Interviews (IDIs)

Roster of IDIs had the detailed information about the respondent i.e. age, educational level, social status, profession and also their contact numbers so that in case of any ambiguity, it could be cross

checked by calling the respondent on the given contact number. IDIs from women were conducted at their own residences while from men either at their homes or work places.

The male respondents were between 30-65 years of age while the female participants ranged from 22-50 years, all resident of same Districts living in that locale by birth or from long time. 33% Female respondents of the BLS were illiterate while 16.67% males were illiterate. 33% males were graduate Graduates and remaining were having matriculate level of education. Most of the female respondents were house wives but a few were LHWs and school teachers also. While the male respondents were had different occupations related to agriculture, teaching, business or Government job.

Water Source

Generally, the IDIs show up that taps, hand pumps/ bore holes, canals and rivers are the common source of drinking as well as domestic use water in the surveyed communities but the canals and rivers are common source of drinking water for animals also; same is the problem with ponds. Most of the times, surroundings of the water sources lack hygienic conditions due to stagnant water, garbage or animal excreta.

IDIs conducted in Punjab and Sindh indicated that the common sources of water in the surveyed Districts were the hand pumps/ bore holes, both for drinking and domestic use. Public hand pumps, usually one for 10-15 Household have been installed by the Government or some organization while some families have their own hand pumps. Hygienic conditions around the public hand pumps were not satisfactory as the dirty and polluted water was stagnant around source and there was no proper drainage system. The hygienic conditions around household hand pumps were comparatively better then public hand pumps. Rain water was not used for drinking purpose. The distance of source was from half to 1 km and people spent about 30-40 minutes to bring water. In Sindh, hand pumps installed by RDPI (NGO) are meant for 5-10 houses and people have to travel about 400-500 feet to fetch water.

In KPK it comes up that the main water sources were wells, hand pumps, canals and rivers. Generally people used same water for drinking and domestic propose. Rain water is also use at some places but only for washing purposes. Hygienic conditions of Municipal water source were not satisfactory as there was stagnant water and garbage around, however the families who have their own hand pumps or water motor maintained clean surroundings. In the Districts where canals or rivers were the source of water, animals also used same water. It was also found that wells were not properly protected and covered thus exposing them to different pollutants.

In Balochistan, common sources of water were canals and ponds, both for domestic and drinking purposes. The same sources were used also by the animals. Water source premises were much polluted at some places as the animal excreta was present around the sources and women washed clothes at the site and put waste water in the source.

Water Transportation

As a general finding of the IDIs, it turns out that irrespective of Province/ Districts, women were usually supposed to bring water from the source to house. In Punjab and Sindh, water sources are located nearer to the communities in the range of few meters to 1 Km, and thus they require less time and effort to fetch water as compared to KPK and Balochistan where distance of the water source varies from place to place, sometimes as distant as 3.5 Km.

Time consumed in bringing water and number of times people bought water depended upon the distance of water source. Women in Punjab usually take around 20 minutes for bringing water, 10-25 minutes in Sindh, while in KPK and Balochistan, it may take even more then hour for bringing water.

Region wise IDIs indicated that in Punjab water was fetched many times a day because of nearer source and in Sindh also, women bring water even 9-10 times daily in summers and each time it takes 15-20 minutes to bring water from the source. Usually, pitchers are use for water transportation but canes, water coolers and buckets are also common. Distance to water source in KPK ranges from few meters to 3.5 Km and it usually takes 15 minutes to 4 Hrs time for bringing water. People usually use pitchers, coolers and buckets to carry of water and there was no vehicle, cart or animal was used for water transportation. Normally, water is brought 2-3 times a day or 6-7 times, if source is very near to the homes. In Balochistan, distance of water source is 1-3 Km and it take 1-3 Hrs for bringing water. They usually brought water twice daily and due to longer distance of water source it was difficult for them to bring water in larger quantities, especially during the months of summer.

Drinking and Domestic-use Water Storage

Pitchers, coolers and buckets are usually used for storage of drinking water whereas domestic use water is stored in drums or tanks. The storage utensils are kept covered and usually cleaned daily with water and sometimes with some detergent. Everybody at home has access to drinking water and children took water from storage by themselves by putting glass or mugs and their hands also dipped in water while taking out water.

Regional IDIs revealed that in Punjab and Sindh, people usually store water in pitchers put on wooden stands. Water coolers are also used for drinking water storage and domestic use water is usually store in buckets. The stored water is normally used within 12-18 Hrs and the storage utensils are washed daily with water and sometime with grass or detergent. Stored water is usually covered and accessible to everybody in home and thus, when children take out water they usually put their hands along with glass or mugs in water and do not cover the water properly. In KPK, IDIs results showed that drinking water was stored in water coolers, pitchers and drums while water for domestic use is stored in buckets and tankers. Routinely, the stored drinking water is kept covered and used in 24 Hrs however, children also take water from storage site by them-selves and put their hand along with mug or glass contaminating the remaining water. Storage capacity was about 30-60 liters in the surveyed Districts of Punjab while in KPK, it was about 50 to 100 liters.

People in Balochistan usually used pitchers, canes and buckets for storage of drinking water for around 12 Hrs as these utensils have limited capacity of 40-50 liters. The stored drinking water was covered either with cloth or proper lid-cover and the storage utensils were washed daily with simple water and sometimes with soap or other detergents. Everybody at home has access to drinking water and children took water from storage by themselves by putting glass or mugs and their hands also dipped in water while taking out water.

Quality of Water

In any of the surveyed Districts in Punjab, Sindh, KPK and Balochistan, laboratory testing of water had not been done thus there was no scientific evidence on quality of water at source. As reported in the IDIs, quality of water was compromised and not satisfactory at many places as in some areas water was yellowish or smelly and river /karez (nalay) water was dirty whereas in canals and unprotected well, its quality was very poor. In areas where the source of water was bore hole, the quality was comparatively good but it became muddy during floods. However, fresh stream water was clean and good in taste.

Most of the people thought that covering the stored water was enough to make it safe for drinking purpose and did not know the importance of purification; and thus, they were not in habit of purifying water although all the respondents were aware of the benefits of boiling water. Financial constraints restricted them to adopt this simple measure for making drinking water safer for daily use. One of the male respondents in Punjab said " *Humaray bachay beemar rehtay hain. Taqreeban elaqay mein sub hi khuck na kuch beemar hain; agar humain saholatain mil jain tu humaray bachay aur baray bhi sehat mand hongay."*

Water Borne Diseases

IDIs indicated that more or less all the respondents knew about water borne diseases and many of them took the name of diarrhea, typhoid, malaria, hepatitis, vomiting and abdominal pain. All the respondents urged to be saved from these diseases. However, in Balochistan, people were not clear on measures for saving themselves from the water born diseases.

One of the respondents from Punjab said "*Hum mareez ka desi elaj kar letay hain. Koi hospital or doctor nahi ha. Doctor tuk lajatay lajatay mareez mar jata ha qun ke who humaray elaqay sa bohat door ha."* Another respondent said, "*Humaray pas khanay ko nahi ha. Hum beemarion sa bachao ke baray ma soch hi nahi saktay."*

Knowledge about ORS:

According to IDIs findings, majority of the people knew ORS and its use for diarrhea but none of them knew to prepare it properly. People in one surveyed community had not even heard the word ORS.

Open Defecation Practices

Overall picture on the bases of the IDIs shows that open defecation practices are quite common in all the surveyed communities. Some houses do have toilet facilities and majority of the people want to have it but due to financial constraints they are unable to build one. However, they are willing to contribute physically if provided with construction material/ cost, estimated by them as some amount between 10,000-50,000 PKR. The toilet (usually one) situated in household is usually hygienic and cleaned by women 1-2 times daily as the whole family uses the same toilet. It is also pertinent to note that IDIs report majority of the schools without functional toilet and hand washing facilities in the vicinity. The available school toilets are pathetic as those are not cleaned regularly/ properly due to lack of proper water supply.

Region wise, in the surveyed Districts of Punjab and Sindh, open defecation practices were common. People wanted to have toilets but majority is poor and not aware of expected cost of its construction. In some areas toilets were constructed by a local NGO (RDIP) but one toilet was used for 5 -10 homes. Only some of the schools have functional toilets but there is no hand washing facility in the schools. According to respondents in KPK, 70-80% used open defecation practices while others have some sort of latrines, usually one for whole family. Those in practice of using toilet before flood had constructed some type of toilets after flood but most of people were not in such a financial state to construct a toilet. Usually people made ditch latrine/ cemented latrines from where excreta was disposed of through drains in open fields. At some places, there is a

boundary wall for defecation and from there excreta was collected in some buckets and disposed off in open field. Some families have toilet but it was reserved for guests only and they themselves used open field for defecation. Proper flush system latrines were in small numbers. In Balochistan also, open defecation practices are quite common. Toilets are scarce and usually of simple pit type. People wanted to have toilets but majority is poor and cannot share financial cost for construction but happily willing to take part physically in construction of toilets. Estimated expenditure in constructing toilets in Balochistan ranged from 10,000-50,000 PKR. Schools toilets were also destroyed due to flood and yet not constructed thus children usually defecate in open fields.

Domestic Waste Disposal

Generally, in all the surveyed communities, disposal of the domestic garbage and waste is a big problem as there were no proper arrangements for collection and disposal of domestic waste. People throw their domestic waste/ garbage outside their homes in any empty plot or open fields. At very few places, the domestic waste is burnt or used as fertilizer.

In all the surveyed Districts of Punjab, Sindh, KPK and Balochistan, the streets were polluted with domestic waste. At some places in KPK, Municipal committee staff visit the area and collected the waste but this is not a routine practice. In Sindh and Balochistan, as a usual practice, domestic waste and garbage was disposed off outside home thus the streets were polluted and hygienic conditions were poor. During rainy days it was even difficult to walk in these streets and neither public nor private sector is engaged in proper disposal of the domestic waste.

One of the female respondent said, "*Kora karkit humaray elaqay ka lia bara musla ha.Gharoon aur galioon ma gund jama rehta ha.log gund utha k garoon sa bahir pehnk datay hain.humaray pas koi intazam ha hi nahi.*"Another respondent said that *"Gandgi ki waja sa humaray elaqay ma pani kara rehta ha.barish k bad galian bohat kharab ho jati hain .humaray lia masjid jana bhi mushkil ho jata ha; Gandgi nay humaray elaqay ki khobsorti khatum kar di ha"*

Hygiene Practices

IDIs findings indicated that all the surveyed communities are aware and the majority practiced washing hands before taking food and after defecation but mostly with simple water. Some of respondents told that they learned these practices from their elders and some learnt its importance from healthcare providers visiting their homes. However, hand washing practice is generally missing in children at all places.

The respondents told that people usually take bath once or twice daily at their homes but their children also take daily bath outside home at canal, river or tube well etc. However, in cold Regions and winter season, daily bath taking is less frequent. Similarly, in water scarce areas of Sindh and

Balochistan, men take bath more often than women. One of female respondents said that "*Humain tu jab yad ajaey to hath dho latay hain.aur hamaray bachoon ko to adat nahi ha"* whereas another female Respondent told that "*Hum tu haftay ma aik bar hi naha patay hain."*

It is also reported that there was no NGOs or Government Department working on WASH issues in their area and even no agency is engaged in creating awareness it.

Preferred Sources Suggested for Creating WASH Messages

IDIs respondents mentioned the following as the preferable sources for creating awareness on WASH:

- Health Teams (By conducting Awareness Sessions in local languages). This was the most demanded method of creating awareness. IDIs respondents said that they wanted to live with health and in hygienic conditions.
- Religious Leaders (Through Masajids)
- School Teachers (For awareness raising among their school students)
- TV and Radio (In poor communities, only a small percentage of people have TV; electricity supply was also a problem in some areas)

Section 4

CONCLUSIONS & RECOMMENDATIONS

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This Baseline Survey conducted to determine Knowledge, Attitude & Practices (KAP) among the rural communities in 17 flood affected selected Districts provides very important information for the post-flood situation on WASH (Water, Sanitation and Hygiene) issues. The information gathered through questionnaires, IDIs and FGDs has been authenticated by observations of the Interviewing Teams in the field. The BLS yielded response rate of 99.6 percent for women, 98.7 percent for men and 100 percent for FGDs and IDIs.

Conclusions:

1. The surveyed communities have strong affiliations with their homes, land and area. Therefore, although displaced for varying time durations, majority of them have returned back to their homes. This reflects their inability also to shift from there, probably due to the financial constraints and mainly due to the reasons mentioned earlier.

2. Open defecation practice is more common in Balochistan, Punjab and Sindh and majority of the surveyed communities have knowledge of its hazards but poverty among them has led to their inability to construct toilet facility in their homes and therefore constrained to practice open defecation in the fields.

3. Majority of the communities are willing to have hand pumps and toilets in their houses and ready to physically participate (as labor) for building it but with the financial assistance from the Government or from some other agency. At many villages, construction material is not available in the surrounding area and therefore the estimated cost for construction of hand pumps/ toilets may be as high as fifty thousand or more.

4. The households having toilets are used by all the family members (averagely 6-7 per household) therefore hygienic cleanliness is doubtful especially in water scarce areas such as the surveyed Districts of Balochistan. Most of the households toilets are without hand washing facilities therefore, although most of the people knew the importance of hand washing after defecation but its actual practice does not commensurate with their knowledge.

5. Many communities claimed of knowing hand washing methods; this certainly reflects their perceived knowledge. Where ever available, the hand washing facility mostly comprises of

water only, without soap or any other detergent. This gap between knowledge and practice of hand washing explains the reason for commonness of water borne diseases among the surveyed communities.

6. Majority of the surveyed communities knew the names of water born diseases (WBDs) but many of them could not relate these to improper disposal of human/ animal excreta and households' solid & liquid waste disposal. Communities are aware of the relationship between flies/ mosquito and stagnant water/ garbage in the streets and fields but majority of them did not take any measure to control them. Further, because of the lack of any drainage system in unpaved streets, they are compelled to bear the burden of stagnant water in the streets.

7. Communities are also aware of the attributes of a clean villages and houses with toilet facility and their relationship with healthy citizenry but practically make little efforts to improve their environment. However, they advocate for a hygienic living environment; this provides a platform for Plan Pakistan to educate the communities for improving their life styles and avoiding WBDs.

8. BLS strongly points out that majority of the surveyed communities do not have access to safe drinking water source (hand pumps/ bore hole/ piped water), especially in the surveyed Districts of Balochistan where the main sources of drinking water are lakes, canals/ springs, rivers or ponds. Problem of the safety of drinking water is further aggravated because of its straight use without any purification/treatment like boiling, sun rays water purification, use of purifying tablets (aqua tab) or some absorbent (e.g. Mussaffa). This is an opportunity again for health education interventions by Plan International as well as providing WASH hardware, e.g. installation of hand pumps/ bore hole and tube wells. In this context, it is also worth noting that majority of the BLS respondents would be willing to physically participate (as labor) for installation of hand pumps and tube wells provided financial assistants is available to them.

9. Another area where in a considerable portion of the surveyed communities lacked knowledge and capacity/ practice is the means of transportation and storage of water for drinking. Many of the households fetch drinking water in pitchers or buckets without lids and some do not even cover it when store at homes. They did not have proper scoops or anything else for taking out the stored water and children usually dip their hands thereby causing contamination of the stored water. These communities need to be provided with

hygienically secure utensils for fetching and storage of drinking water so that they may be saved from many of the WBDs.

10. Construction of paved streets with covered drainage system would improve sanitary conditions in the village by helping safe disposal of waste water. Similarly ensuring safe disposal of house hold garbage/wastes should be buried in the land outside the village or through its regular collection would save them from flies, mosquitoes and other insects.

11. Most of the communities practicing open defecation were unaware of the hazards of leaving their feces uncovered in the fields. Added disadvantage occurs because many people, especially children, do not wear shoes either as a habit or due to poverty/ un-affordability and therefore become more prone to come in contact with fecal matter, garbage and polluted water and thus to contract WBDs more promptly. These communities need to be educated about hazards of open defecation and its relationship with different diseases and practice to cover it tills the time they have toilets and also wear shoes. Also, providing shoes to the communities practicing open defecation and also helps them to save their health in absence of toilets.

12. School authorities are also not conscious about providing toilet facilities for their students and keeping it functional along with hand washing facilities comprising of running water and soap. Communities also are not demanding such facilities for their children in schools primarily because of the lack of awareness about health issues as well as their citizenship rights.

13. Health is everybody's concern and therefore, the surveyed communities urge to receive health and wash related information preferably through radio or interpersonal communication by some healthcare provider such as LHWs or social mobilizers. The survey concludes that many of the people especially women never received any information on WASH or other health issues because of the un-accessibility to means of communication including TV and radio, especially in Balochistan and Sindh.

Recommendations

On basis of the findings of the WASH KAP BLS and the conclusions drawn upon them, it is recommended that:

- An Advocacy Campaign may be launched to mobilize local political and administrative support and resources for successful implementation of the Plan interventions on WASH

- A comprehensive Health Education & Promotion Campaign may be designed for the BLS surveyed communities to raise awareness, leading to attitudinal & behavioral change among them, regarding WASH related issues, especially, but not limited to, the following:
    - Importance of the safe drinking water
    - Characteristics of safe drinking water
    - Significance of improved source for obtaining drinking water
    - Relationship between unsafe drinking water and WBDs
    - Sign and symptoms of dehydration and initial management of diarrhea with fluid replacement therapy significance/ preparation of ORS
    - Households methods for water treatment
    - Use of proper utensils such as jerry canes or bucket-with-lid, for safe transportation of drinking water
    - Protected drinking water storage
    - Hazards of stagnant water and its relationship with WBDs
    - Safe disposal of waste water and importance of drainage system
    - Safe disposal of household waste/garbage and its use as fertilizer
    - Citizen rights and public demand for basic amenities including improved water source and drainage system from local authorities/municipality
    - Hazards of open defecation and its relationship with diseases
    - Importance of covering feces after open defecation
    - Advantages of having proper latrine with hand washing facility within the HH
    - Advantages and use of flush toilets
    - Hazards of unclean toilets and its relationship with diseases
    - Identification of breeding places for mosquitoes, flies and adopting precautionary measures
    - Household measures for protection from misquotes & food contamination by flies
    - Hazards of improper animal waste disposal
    - Attributes and benefits of a clean, hygienic and environment friendly village

- Need for functional toilets hand washing facility in schools for children
- Hand washing techniques and significance of water with soap
- Significance of washing hands before eating, cooking & feeding babies and after defecation, nappy change/ cleaning baby, animal excreta and cleaning the house
- Significance of oral hygiene and use of tooth brush/household methods (Miswak) for cleansing teeth
- Importance of taking bath with clean water and its relationship with skin problems
- Significance of cutting nails and wearing shoes with special focus on women so that they may take care of their children

- The above comprehensive Health Education & Promotion Campaign may require development of IEC material consisting of attractive and colorful pictorials for common understanding by illiterate/ less educated women, children and men. Such IEC material should be prepared with involvement of local influentials and indigenous communities to ensure its socio-cultural acceptability.
- Community-based healthcare providers such as LHWs and volunteers may be trained to use the Plan IEC material and following the PRA techniques, Community Support Groups comprising of local influentials including religious leaders and women, may be formulated to prop up and take ownership of the WASH initiatives by Plan International.
- Mobile Teams may also be deployed to arrange public seminars in keeping with local norms and indigenous language for raising awareness on WASH concerns.
- Schools/ educational institutions and teachers also will have to be involved/ educated in the proposed comprehensive Health Education & Promotion Campaign to inculcate behavior change in children leading to long term effect and impact.
- Electronic media (radio and TV), mobile phone and print media may also be engaged as an integral component of the said comprehensive Health Education & Promotion Campaign and in this context affordability and accessibility by people, especially the women, will have to be considered. Otherwise, free distribution of one radio for each household may be an option for the Plan International.
- Mobile phones may also be used for disseminating key messages relating to WASH for creating awareness, acceptance and bringing change in Knowledge , attitude and the behaviors of the communities (Men, Youth, and students)

- Geographical mapping and need assessment may be carried out through the Plan's Implementing Partners (IPs) to provide WASH facilities such as:
    - Installation of hand pumps in collaboration with local communities
    - Construction of household toilets along with hand washing facilities in collaboration with local communities
    - Construction of school toilets with hand washing facilities in collaboration with school authorities
    - Pavement of streets and construction of drainage system in collaboration with local authorities/ municipality
    - Proper collection and disposal of household waste

Bibliography

- United Nations Children's Fund (UNICEF). 2009. Survey: Water, Sanitation and Hygiene-Findings of a Household Survey Conducted in 18 Districts of Mozambique. Mozambique: UNICEF
- United Nations Children's Fund (UNICEF). 2009. Questionnaire for National assessment of Water, Sanitation and Hygiene (WASH): In Primary Schools of Brazil. Brazil: UNICEF
- United Nations Children's Fund (UNICEF). 2008. (UNICEF) Annual Report-2008

  New York: UNICEF
- Inter Works Europe Limited, Ballyshoneen, Berrings, Co Cork. 2008. Global Survey of Gaps in WASH Capacities for Emergencies; Results of on-line Survey. 2008. Ireland
- Kamal, Kar and Robert Chambers. 2008. Handbook on Community Led Total Sanitation

  United Kingdom (UK): Plan International
- Swiss Agency for Development and Cooperation, Employment and Income Division/ Urs Heierli (MSD Consulting), Berne. Edition: November 2007. ONE FLY IS DEADLIER THAN 100 TIGERS. Printed in India
- Annual Report-Baseline Water Quality, Stream, Lake and Saline Water. 2003. Auckland Regional Council. Auckland

ANNEXURES

Organizational Profile

National Trust for Population Welfare-NATPOW

The National Trust for Population Welfare-NATPOW, is an autonomous organization established by the Government of Pakistan since 1994 under Charitable Endowment Act 1890, and it is mandated to create an effective partnership between Government & Donors and Civil Society & Private Sector.

NATPOW with its Head Office at Islamabad and Six Regional Offices at Lahore, Multan, Karachi, Peshawar, Quetta and Gilgit, provides financial & technical support to its affiliated Civil Society Organizations-CSOs (362) for reaching the rural, marginalized & poor communities, rendering Safe Motherhood Services including RH&FP/ HTSP, Neonatal & Child Healthcare and improving Reproductive Health status of women, adolescents & men, with special emphasis on community mobilization & participation, advocacy & awareness raising, HRD/ capacity building and service delivery, so as to meaningfully contribute towards implementation of the National Population Policy and development process in the Country.

Vision and Mission Statement:

- Vision:

  NATPOW envisions an enabled Civil Society, efficient and actively involved in the population & development agenda, provision of social services and meaningfully contributing to policy formulation & legislative process, for socially empowered communities and an educated, healthy & prosperous Pakistan.

- Mission:

  To excel as a Grant Management Body for the Civil Society Organizations-CSOs, enabling them to reach out to the rural, poor, marginalized and under-served Communities to address their immediate needs through Service Delivery and seek long term solutions by means of Policy Advocacy, Legislation, Strategic Communication, Awareness Raising and Human Resource Development/ Capacity Building for advancing population & development agenda in Pakistan.

Priority Areas:

- Safe Motherhood & Child Healthcare Service Delivery through CSOs Network
- Community Mobilization for Reproductive Health & Family Planning: Services & Rights
- Policy Formulation and Legislation on Population & Development
- HRD/Capacity Building Trainings for Public and Private Sector Personnel

NATPOW Strengths

- Professionals' Pool of experienced Public Health Experts and Master Trainers.
- Managerial Staff at NATPOW Head Office and the 06-Regional Offices.
- Unique positioning and close access to the Public and Private Sectors.
- Country-wide Network of Partner Civil Society Organizations-CSOs (350).
- HRD/ Training Wing works in collaboration with diversified Institutes/ Organizations such as Regional Training Institutes, RHS-A Centers, Tertiary Care Hospitals.

National Institute of Population Studies – NIPS'

The National Institute of Population Studies was established in 1986 as an autonomous organization, at Islamabad, through a resolution of the Government of Pakistan to undertake population and development research and to provide feedback to the Government departments and agencies for policy formulation and planning in the sphere of population and development, pragmatic implementation and effective monitoring of Reproductive Health/Family Planning programs. An autonomous organization with a Board of Governors and an Advisory Committee of experts, NIPS functions as a core institution for research, training, human resources development relating to population welfare and development. NIPS is set out to play a key role in the dynamics of National population and its complexities. Its canvas of activities is challengingly broad embracing socio-economic dimensions of a determined young nation.

Vision and Mission Statement:

- Vision:

  National Institute of Population Studies aspires to attain prominence as "Centre of Excellence", recognizable nationally and internationally for reliability and high quality of its research, training and human resources development, monitoring and evaluation in the areas of population and development.

- Mission:

  To function as an autonomous organization to undertake applied research in the field of population and development, operations research and policy analysis to help and improve population welfare programme; Conduct evaluation, surveys and monitoring of Population Welfare Programme and its components for providing research based analytical insight; Human resource development through conducting short term and long term training programmes, academic courses in the field of population and development.

Priority Areas:

- Operational Research in the field Reproductive Health including family planning
- Evaluation of the Components of Population Welfare Programme
- Cross sectional (including baseline, midline and endline) surveys
- Population growth & its implications
- HRD/Capacity Building Trainings for Public and Private Sector Personnel

NIPS Strengths

- Professionals' Pool of experienced Survey Managers, Experts and Trainers
- Survey Management & Population Projections
- HRD/ Training in collaboration with PWDs, different Institutes/Organizations

List of Contributors

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NATPOW Regional Coordinators	
Mr. Abdul Majeed Ansari, Regional Officer, NATPOW Karachi	
Mr. Muzammil Shah, Regional Officer, NATPOW Peshawar	

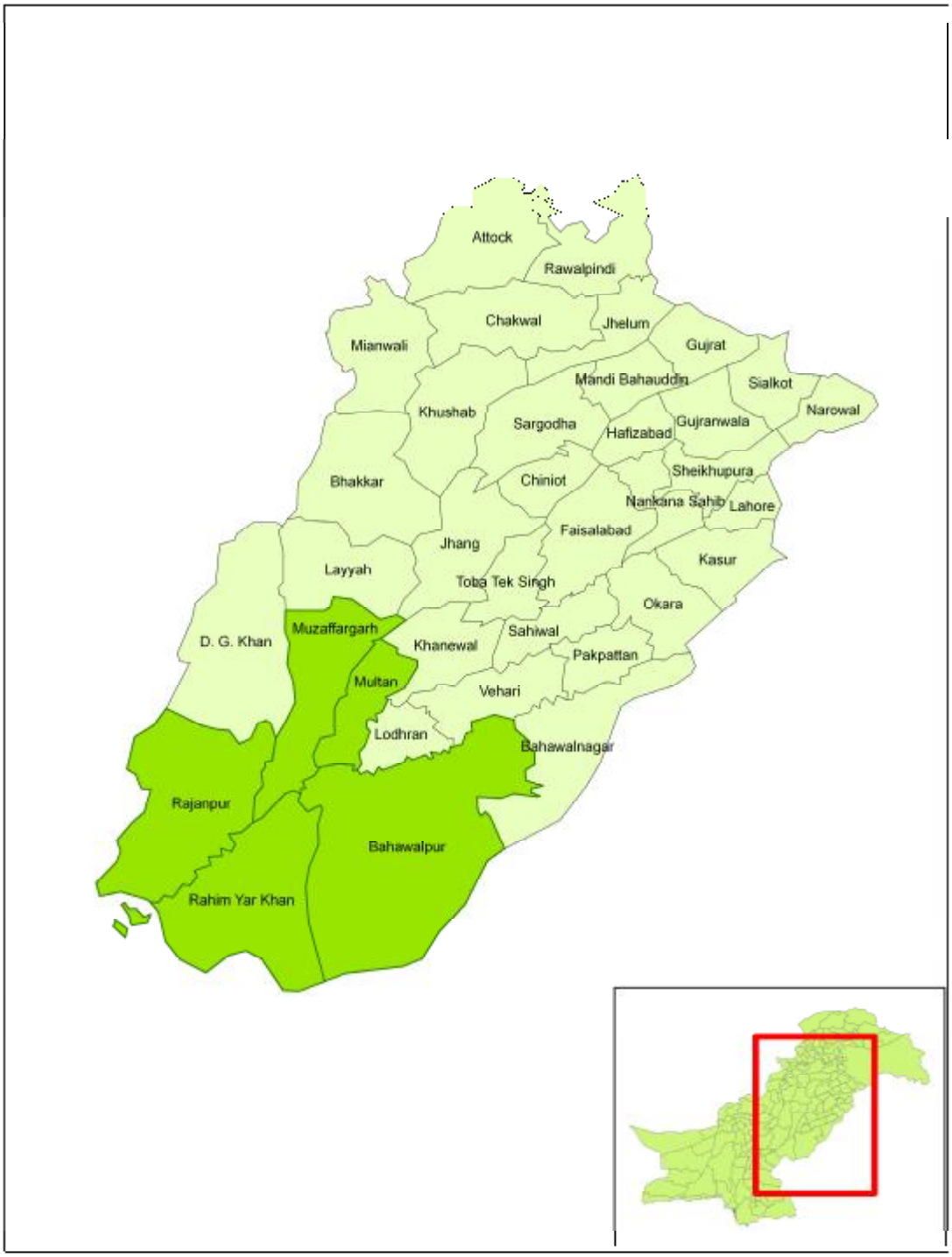
List of IPs and Field Teams

Province	Districts	NATPOW Affiliate CSOs (IPs)	Field Team Members
Punjab	Bahawalpur	Pakistan Rural Workers Social Welfare Organization	Misbah Noureen Rizwan Ahmad Arbi
	Multan	Paragon Welfare Society	Uzera Yasin Ahmad Bemissal
	Muzafargarh	Women Social Organization	Abu Bakkar Muqadas Abro
	Rahim Yar Khan	Pakistan Rural Workers Social Welfare Organization	Bushra Iqbal Naveed Iqbal
	Rajanpur	Sayya Foundation	Zahid Hussain Rashda Bano
Sindh	Hyderabad	Sindh Rural Partner Organization	Riaz Ali Nonati Nobahar Ali
	Sukkur	Sujaag Samaji Ittihad Association	FarzanaKousar Mir Tahir Ali
	Kashmore	Kainaat Development Association	Bashir Ahmed Zinaib Malik
	Kamber Shahdad Kot	Libral Social Welfare Association	Musarat Abbasi Muhammad Ali Aghar
	Jaccobabad	Community Development Foundation	Muhammad Yaqoob Sumro Zeenat Soomro
KPK	Haripur	Human Development Organization	Adeel Ahmed Saira Zahoor
	Nawshehra	Pakistan Rural Development Program	Farah Qayyum Ovais Shah Afridi

Province	Districts	NATPOW Affiliate CSOs (IPs)	Field Team Members
	Peshawar	Pakistan Rural Development Program	Irshad Ali Fouzia Shaheen Latif Kavita
	Charsada	T.B. Association	Dil Raz Owais Arif
	Mardan	Friends Welfare Society	Amir Zaib Ms. Shazia
Balochistan	Jaffarabad	Women Welfare Organization, Jaffarabad	Balach Khan Sakeena Raza
	Naseerabad	Women Welfare Organization, Jaffarabad	Anwar-ul-Haq Sakina

Provincial Maps

Punjab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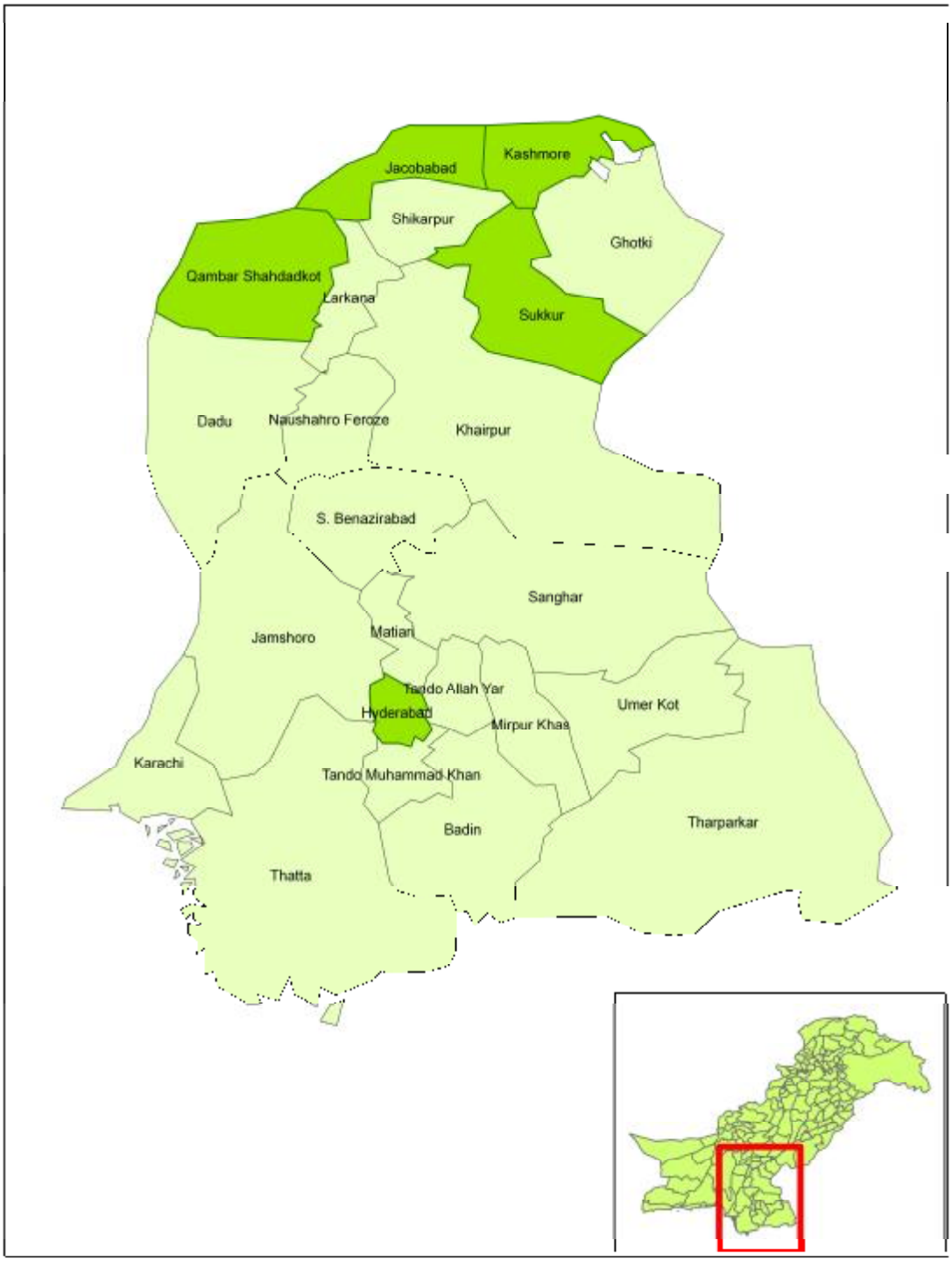
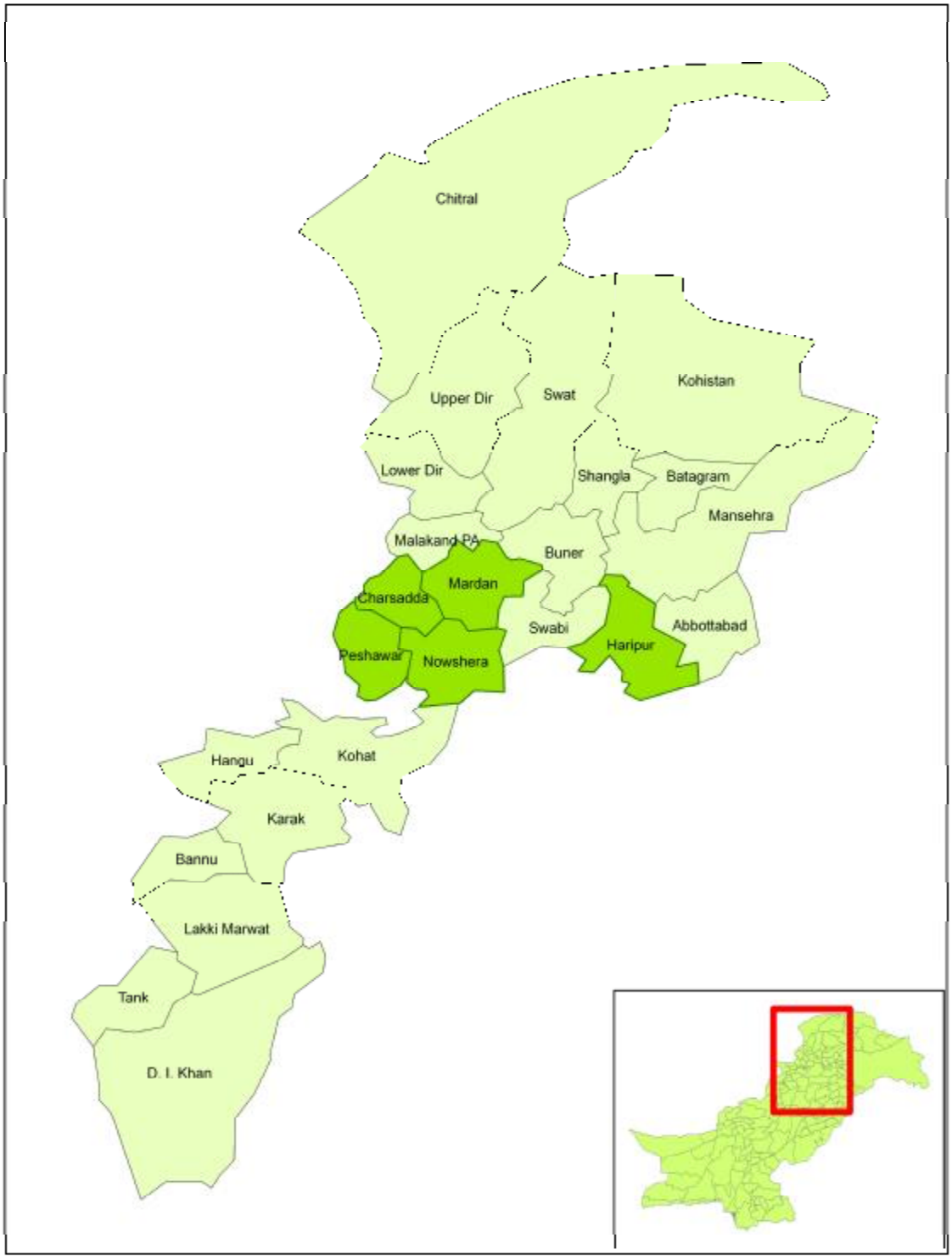
Rawalpindi
Chakwal
Jhelum
Mianwali
Gujrat
Mandi Bahauddin
Sialkot
Narowal
Khushab
Sargodha
Hafizabad
Gujranwala
Sheikhupura
Bhakkar
Chiniot
Nankana Sahib
Lahore
Faisalabad
Jhang
Kasur
Layyah
Toba Tek Singh
Okara
Muzaffargarh
D. G. Khan
Khanewal
Sahiwal
Pakpattan
Multan
Vehari
Lodhran
Bahawalnagar
Rajanpur
Bahawalpur
Rahim Yar Khan

Sindh


Jacobabad
Kashmore
Shikarpur
Ghotki
Qambar Shahdadkot
Larkana
Sukkur
Dadu
Naushahro Feroze
Khairpur
S. Benazirabad
Sanghar
Jamshoro
Matiari
Tando Allah Yar
Hyderabad
Mirpur Khas
Umer Kot
Karachi
Tando Muhammad Khan
Badin
Tharparkar
Thatta

KPK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Upper Dir
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Lower Dir
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Mansehra
Malakand PA
Buner
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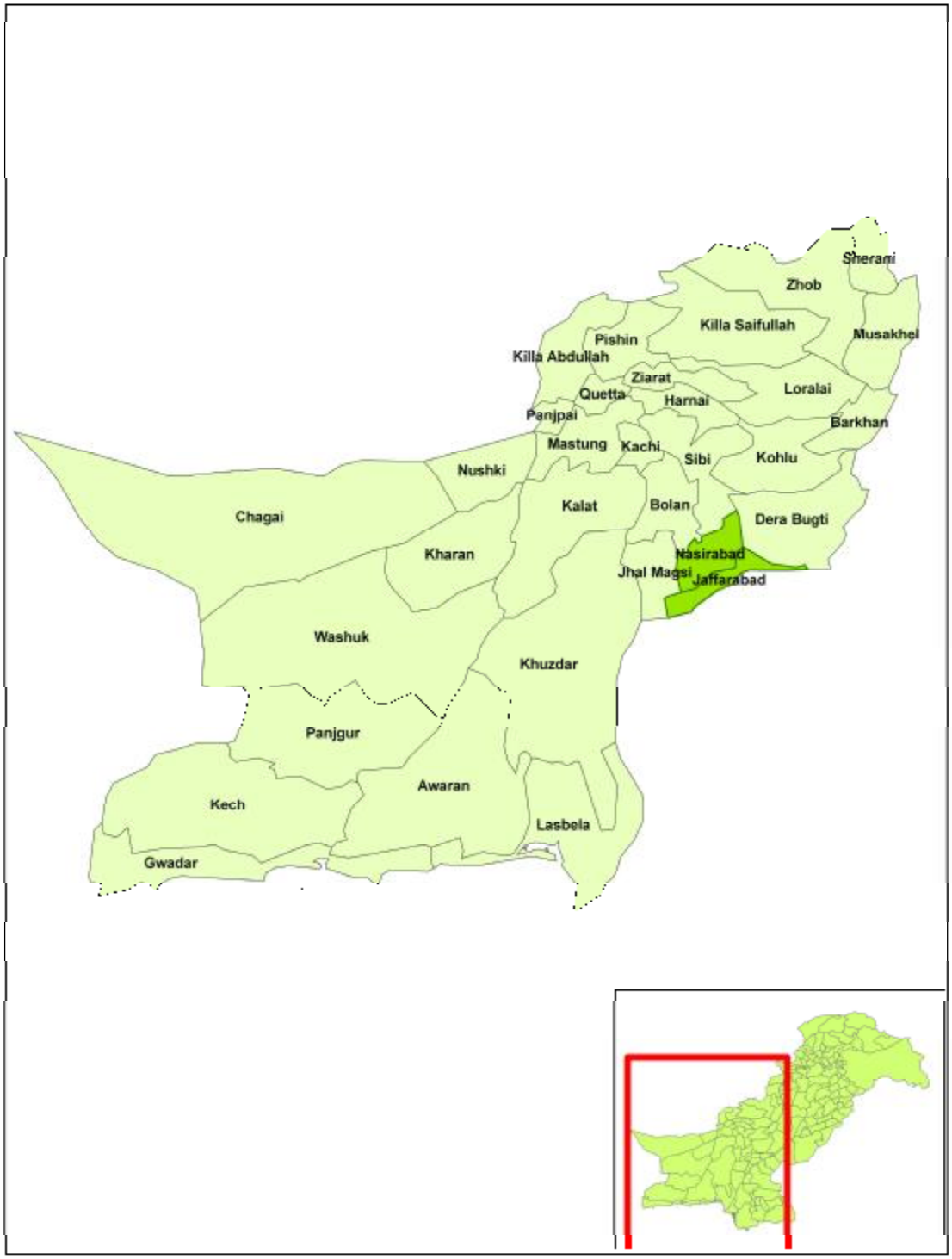
Abbottabad
Haripur
Peshawar
Nowshera
Hangu
Kohat
Karak
Bannu
Lakki Marwat
Tank
D. I. Khan

Balochistan



Additional Tables

Research Tools

Rural Sanitation in Flood Affected Districts (RSAD)

KAP Baseline Survey, 2011

Focus Group discussions

1. Water related information (source, drinking/domestic use, distance, safe, color, taste, storage facility, covering and cleaning, etc)
2. Water supply, problems
3. Rain water (store, how long, for how long store, stagnant dirty water near by)

Sanitation

1. What kind of facility was used (before/after flood, who built the present, time, funded by, functional, use by family members)
2. Defecation (satisfied/not, why not satisfied)
3. Latrine, (HH, if no intension to build, cost for underground/on ground construction, physical/financial cooperation in construction/shop)
4. Separate toilet/M/F, who uses it, how to use it.

School Latrine

1. Availability, functional, usage, hand washing facility, what agent they use.

Waste Disposal

2. Waste disposal from, HH, cleaning
3. HH garbage, streets conditions, waste problem
4. Mosquitoes

Bathing, Hand washing

1. Men/woman and children

Awareness on Water and Sanitation, perceptions/practices

2. Source of information (water, sanitation/health)
3. Access to any source, which source prefer/time, source used mostly/effective media
4. Last month(read/listened or viewed any such message on health, hygiene and sanitation/attended any meeting attended, who arranged
5. Attributes of clean /healthy village
6. Benefits of a clean village

Waterborne diseases

1. Common diseases in the area, knowledge on waterborne diseases. relationship between open defecation/disease
2. Name three diseases that spread from poor sanitation/un hygienic conditions?
3. Suggest 3 key actions by HH/Community for improved sanitation/hygiene
4. ORS, have you heard, purpose, how it is made? Conditions when used? Immediate actions a family needs in case of diarrhea?
5. Last three Months Medical Expenditures on water Born Diseases.
6. How do you wash your hands? (TO compare according to WHO)
7. What is the importance of washing hands for you and your child's health?
8. How a poor latrine condition is related to your family's health?
9. Do you take any measures to clean your streets? If yes, what measures?

Rural Sanitation in Flood Affected Districts (RSAD)

KAP Baseline Survey, 2011

Field Guide for IDI

Q1= what would you understand by safe during water?

Source of water

1. What is the source of water for your household?
2. Separate source for drinking and domestic water
3. Source properly covered/uncovered
4. 4.Cleaning schedule
5. Premises neat and clean
6. Animals also use same source
7. Distance of source from home
8. Time consumed in bringing water from source to home
9. Frequency of water collection form source

Rain water

1. Are you using rain water for drinking or for domestic purpose
2. If yes, than why using rain water
3. What benefits they are expecting from the use of rain water

Storage

1. Type of utensils used
2. Separate or same for drinking or domestic use
3. Duration of Storage
4. Covered or not covered
5. Access-child, Adults or both
6. Use mug or directly pour
7. Capacity of Storage
8. Frequency of cleaning the utensils
9. How wash or clean utensils
10. Use of Cleaning agent

Purification of drinking water

1. Whether purify water or not
2. Why
3. Method of purification

4. Why
5. Any alternative available
6. If not than why
7. Smell, color, taste of drinking and domestic water

Water born diseases

1. Knowledge about water born diseases
2. Name any water born diseases
3. How can we reduce water born diseases incidence

Overall

1. Any problem in water supply, storage & uses
2. Are you satisfied with quality, quantity of drinking & domestic use water
3. Organizations working on safe drinking water in your area
4. Source of information for safe drinking water
5. What will be the most valuable source of information

Sanitation:

Toilet Facilities:

1. Defecation practices
2. Same before and after flood
3. If not why
4. Currant toilet facilities
5. Number
6. Type
7. Functional
8. Separate for adults & children
9. Separate for women & men
10. When constructed
11. Who funded
12. How dispose of toilet waste
13. Cleanliness of toilet
14. Who responsible
15. Cleaning agent used
16. Satisfied with toilet facilities
17. If not, what Improvements want
18. If no toilet
19. Want to built
20. Expected cost

21. Will you physically or financially participate
22. Toilet practices of children at school
23. Type
24. Functional toilets at school

Disposal of Domestic waste

1. Type of disposal of other waste
2. Why
3. Condition of streets
4. Is Waste a problem of area
5. Knowledge of hazards of improper waste disposal
6. Common diseases in area due to waste
7. Measures against mosquitoes
8. Measures adopted to reduce prevalence
9. Suggestion to reduce prevalence of these diseases

Hygiene:

1. Hand washing Practice before and after cooking, eating, cleaning, feeding
2. Hand washing after changing baby nappies
3. Hand washing after toilet use, live stock
4. Children Practices
5. Hand washing –children School practices
6. Facilities available at school
7. Agents Use
8. Bating practices
9. Knowledge about hand washing, bathing
10. From where get information
11. Is print/ electronic media use for this knowledge?
12. What media you prefer
13. Media, interpersonal, gathering, community meetings, newspaper magazines, mobile
14. why
15. Oral hygiene, Miswak, Tooth Powder, Brushing teeth etc. Male Female and Children
16. Female hygiene practices and related diseases

Selected Pictures

General

WASH KAP-BLS Field work Activities






Punjab

WASH KAP-BLS Field work Activities






Sindh

WASH KAP-BLS Field work Activities






Khyber Pakhtunkhwa

WASH KAP-BLS Field work Activities

Balochistan

WASH KAP-BLS Field work Activities