



## WASH Needs Assessment Report

In Khayran Al Muharraq District of Hajjah Governorate and Al Qafr District of Ibb Governorate



Conducted by

RDP

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## List of Acronyms

BoQs	Bills of Quantity
FGDs	Focus Group Discussions
HC	Host Community
HF	Health Facility
HHs	Households
IDPs	Internally Displaced Persons
IPC	Integrated Phase Classification
KIIs	Key Informants Interviews
NA	Needs Assessment
NC	Nutrition Cluster
NGO	Non-Government Organization
OCHA	Office for the Coordination of Humanitarian Affairs (United Nations)
RDP	Relief and Development Peer Foundation
SA	Standard Allocation
SAM	Sever Acute Malnutrition
WASH	Water, Sanitation and Hygiene

## 1. Executive Summary

This needs assessment was designed to be impartial, unbiased, comprehensive, context-sensitive, timely, and up-to-date. It provides sound evidence based on the existing WASH situation in both Khairan Al Moharraq district of Hajjah Governorate and Al Qafr district of Ibb Governorate in order to plan and prioritize the needs and adopt the appropriate and suitable methodology of intervention.

RDP conducted this WASH needs assessment from Jan 29<sup>th</sup> to Feb 12<sup>th</sup>, 2019 in the two districts aiming to define and determine the WASH needs by providing in-depth WASH operational information, statistical data about the WASH needs, and preferences of the affected community in these two high priority districts. The needs assessment was conducted according to the WASH cluster technical guidelines for OCHA 1<sup>st</sup> SA 2019 as illustrated in the methodology and approach section.

Khayran Al Muharraq district of Hajjah Governorate is one among the 122 WASH cluster focus districts as well as among the 193 food insecure districts. This district was classified as IPC phase 4 where 57.5% of the population; 77,000 individuals (HC and IDPs) are in IPC 4 and 5. The sample included a total number of 187 HHs interviews in five sub-districts (Ad Dane'e, Bani Hamla, Sharqi Al Khamesayn, Gharbi Al Khamesayn, and Masrooh) of Khayran Al Muharraq.

Al Qafr district of Ibb Governorate is one among the 122 WASH cluster focus districts as well as among the 230 health cluster focus districts. The district was classified as IPC phase 4 and 5 where 52.5% of the population; 77,000 individuals (HC and IDPs) are in IPC phase 4 and 5. The sample included a total number of 223 HHs interviews in 15 sub-districts (Al Karaba, An Nakhla, Bani Joma'ah, Bani Sawi, Bani Saba, Bani Saif Al Ali, Bani Saif As Safil, Bani Omar Al-Safil, Bani Omar Al-Eali, Bani Mubarez, Bani Margham, Bani Muslim, Bani Mahdi, Hemyar, and Madhagayn) of Al Qafr.

According to the last smart survey of Nutrition Cluster, the SAM rate in Khayran Al Muharraq was 3.3% and 2.7% in Al Qafr district with an estimated number of 937 SAM cases of children 6-59 months in Khayran Al Muharraq and 636 SAM cases in Al Qafr district.

Community acceptance was captured from the FGDs and KIIs data which was directly fed into the findings and recommendations of the NA to ensure accountability to affected population.

RDP has deployed two teams of field enumerators for the NA in the two districts which were trained and led by RDP WASH engineers, 10 enumerators in Khayran Al Muharraq (5 male and 5 female) and 12 enumerators in Al Qafr (7 male and 5 female) to conduct the FGDs and HHs interviews using Kobo Collect forms monitored

by GPS coordinates to ensure the reliability of data and visualize the figures on the map. The team leaders conducted the KIIs, water sources assessment visits, and general information of each sub-district.

The comprehensive WASH NA included HHs interviews, Key Informants Interviews, Focus Group Discussions, and General Situation information collection using the WASH cluster tools and RDP customized tools. The famine risk factors were included in the sampling where health and nutrition factors were assessed and samples of HHs with SAM cases were interviewed. The sample covered high land and low land areas considering the geographical factors. Water sources were identified and mapped as a baseline and to consider further assessment during the intervention.

#### Khayran Al Muharraq:

36% of the interviewed samples were IDPs where 31% of which are hosting other IDPs families. 58% of the remaining 64% interviewed samples were host community HHs hosting IDPs in their houses. Recent conflict escalation in Hajjah has caused more IDPs to flee to Khayran Al Muharraq district. The increased number of people per HH caused a dire need of water and sanitation services and has increased the demand and load on the available water sources and sanitation facilities.

#### Water

- Up to 56% of population in Khayran Al Muharraq get water from unprotected wells, 60% of which are having issues relating to taste, appearance or smell of the water they obtain. Only 27% are treating their drinking water using: water filters (58%), chlorine tablets (14%), and boiling water (28%). The remaining 73% of HHs don't treat their drinking water mainly due to lack of treatment materials (53%) and lack of knowledge (29%).
- The average person uses from 15-40 liters of water per day according to sphere standards. In a district level, 62% of HHs are using less than 15 litter/person/day and 35% of HHs use between 15-40 litter/person/day which is much less than the minimum sphere standards. Only 3% of HHs use more than 40 litter/person/day. This means that the whole district is in acute need of water supply.
- In a sub-district level, 80% of HHs in Sharqi Al Khamesayn and 27% of HHs is in Gharbi Al Khamesayn use less than 15 litters/person/day. In Gharbi Al Khamesayn, which was selected for the intervention, 100% of people don't have enough water to use. 62% of HHs are using less than 15 litter/person/day and 35% of HHs use between 15-40 litter/person/day which is much less than the minimum sphere standards.
- 62% of HHs don't treat water because they don't have the required materials to treat water. 33% of HHs don't know how to treat water. The need for awareness and water filters and chlorine is very obvious in a district level.

- 65% of HHs lack enough water for HH needs of cleaning and other uses, and they adapt by reducing drinking water 30% of HHs, reducing hygiene water 37%, and reducing cleaning water 43%.
- HHs spend a lot of time to bring water. Women and children are the responsible HHs members for fetching water. In a district level, only 32% of HHs spend less than 30 minutes to bring water while 20% of HHs spend 1-2 hours to bring water and 42% spend between 30 minutes and 1 hour to bring water.
- 97% of HHs have a problem with fetching water due to far distance and queuing time.
- Women and children are the ones responsible for fetching water from water sources, and they spend long time in fetching water. Women are not separated in lines from men. Children don't go to schools due to this issue
- The water infrastructure in the urban area is not operating for more than 7 years while the rural areas don't have sufficient number of water points to cover the need

### Sanitation

- In a district level, 42% of HHs don't have access to functioning latrines while 44% don't have enough latrines; one for 20 individuals according to sphere standards. Only 14% have enough latrines in the whole district.
- 42% of HHs use flush latrine to the open (unimproved) and 36% use pit latrine-open/without slab (unimproved)
- Waste water and sanitation is a main issue in Khayran Al Muharraq district. In a district level, 74% of households have issues with waste water around their houses and environment.

### Hygiene

- 94% of HHs leave their garbage in public areas. 54% of HHs don't have soap and 28% said that they had soap, but the interviewer did not see it, while only 18% of HHs have soap. The main reason for not having soap for 42% of HHs was because they couldn't afford it.
- 99% of HHs don't have hand washing facilities.
- 98% of HHs did not receive any hygiene promotion messages in the last year.

The sub-district level analysis showed that Gharbi Al Khamesayn is the most affected sub-district and in acute need of water, hygiene and sanitation services.

### Al Qafr district:

In Al Qafr district, 14% of the interviewed samples are IDPs and 86% are HC. The number of family members per HH in Al Qafr district is large which makes the needs for water and sanitation facilities per HH larger than expected.

## Water

- Up to 41% of population in Al Qafr district get water from unprotected wells and 18% obtain it from boreholes. 57% of HHs are having issues relating to taste, appearance or smell of the water they obtain. Only 19% treat their drinking water while 81% don't. 63% of those who don't purify their drinking water don't have any materials for water purification.
- 33% of HHs use less than 15 litter/person/day and 53% of HHs use between 15-40 litter/person/day which is much less than the minimum sphere standards. . In a sub-district level, the three chosen sub-districts are having this issue significantly with 56% in Bani Saif Al Ali, 43% in Madhagain, and 42% in Bani Mahdi sub-districts.
- 37% of HHs members in a district level spend between 30 minutes and 1 hour, and 24% of HHs members spend between 1-2 hours to go to the main water point, fetch water, and return.
- 97% of HHs have a problem with collecting the water in terms of far distance and queuing time
- Women and children are the ones collecting water from water sources and they spend where women are not separated from men and children don't go to schools due to this issue
- People use different coping strategies to adopt with lack of drinking water. A significant percentage of people drink water that is usually used for cleaning or other purposes than drinking and reduce drinking water consumption.

## Sanitation

- 30% of HHs don't have access to functioning latrines, while 10% don't have enough latrines; one for 20 individuals according to sphere standards. 60 % of HHs have enough latrines, but they are not in good conditions.
- 32% of HHs use flush latrine to the open (unimproved) and 25% use pit latrine-open/without slap (unimproved)
- 78% of HHs have visible wastewater around their houses

## Hygiene

- 61% of HHs leave their garbage in public areas. 35% of HHs don't have soap and 57% said they have soap, but the interviewer did not see it, while only 8% of HHs have soap. The main reason for not having soap for 30% of HHs was because they can't afford it.
- 91% of HHs don't have hand washing facilities.
- 86% of HHs did not receive any hygiene promotion messages in the last year.
- Most of HHs cannot afford buying the basic hygiene items of soap and detergents.



The sub-district level analysis in the key findings sections shows that 3 of the 15 sub-districts (Bani Saif Al Ali, Bani Mahdi and Madhagain) are the most affected sub-districts and in acute need for water, sanitation and hygiene services.

## Recommendations

- The first recommendation is to show the need in the two districts and the acute need for WASH services there which might not be covered by the intended intervention by RDP upcoming project.
- Conduct a feasibility study to evaluate the appropriateness of the intervention of rehabilitation of water schemes and choose the suitable location to conduct it.
- Rehabilitation of two water schemes in the two districts as a first stage (pilot) and extend the intervention to other sub-districts as the priority indicates in the analysis
- Provision of communal water tanks to be linked with the water scheme which will be rehabilitated to be in closer locations to beneficiaries
- Provision of water filters for HHs for treatment of drinking water
- Implement a water quality surveillance and mapping of water sources
- Construction and rehabilitation of family latrines and rehabilitation of existing latrines
- Distribution of basic and consumable hygiene kits for HHs
- Conduct cleaning campaigns in the selected sub-districts

Conduct hygiene KAP study in the selected sub-districts as a pilot study to measure the impact of the intended interventions to the knowledge, attitude, and practices of beneficiaries

## 2. Background

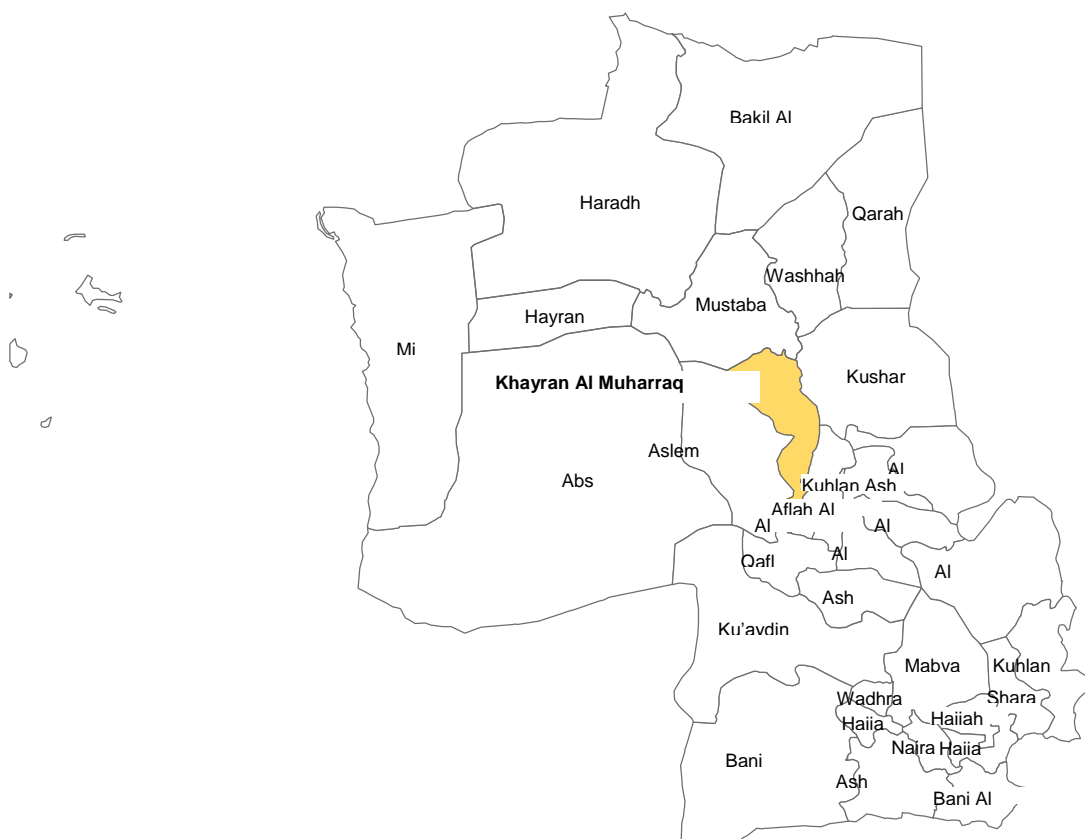
Yemen has undergone a series of successive socio-economic, political and security crises in the past years, accompanied by sharp deterioration of economic indicators, macroeconomic balances and people's living standards, especially the most vulnerable segments of the population. The combined multi-faceted impact of the prolonged conflict, high food and nutrition insecurity, and widespread cholera outbreak has put Yemen at grave risk of worst and biggest humanitarian disaster in the world. The situation is dire with 22.2 million people requiring some kind of humanitarian assistance to meet their basic needs; an estimated 17.8 million are food insecure (including 8.4 million severely food insecure); 16.4 million lack adequate access to clean water or sanitation; 16.4 million people lack sufficient access to healthcare; an estimated 2 million children under the age of five are acutely malnourished.

Hajjah Governorate in Yemen is located to the north-west of the capital Sana'a, and about 123 kilometers away, and the population of the province 7.5% of the total population of Yemen with a total population of 1,782,000 people, and ranked fifth among the governorates of the Republic in terms of population.

Khairan Al Moharraq district is one of the 31 districts of Hajjah and it has a population of 68,707 people.

Khairan Al Moharraq district has 123 villages in 5 sub-districts; Bani Hamlah, Ad Dane'ei, Sharqi Al Khamesain, Gharbi Al Khamesain, and Masrooh.

Hajjah governorate

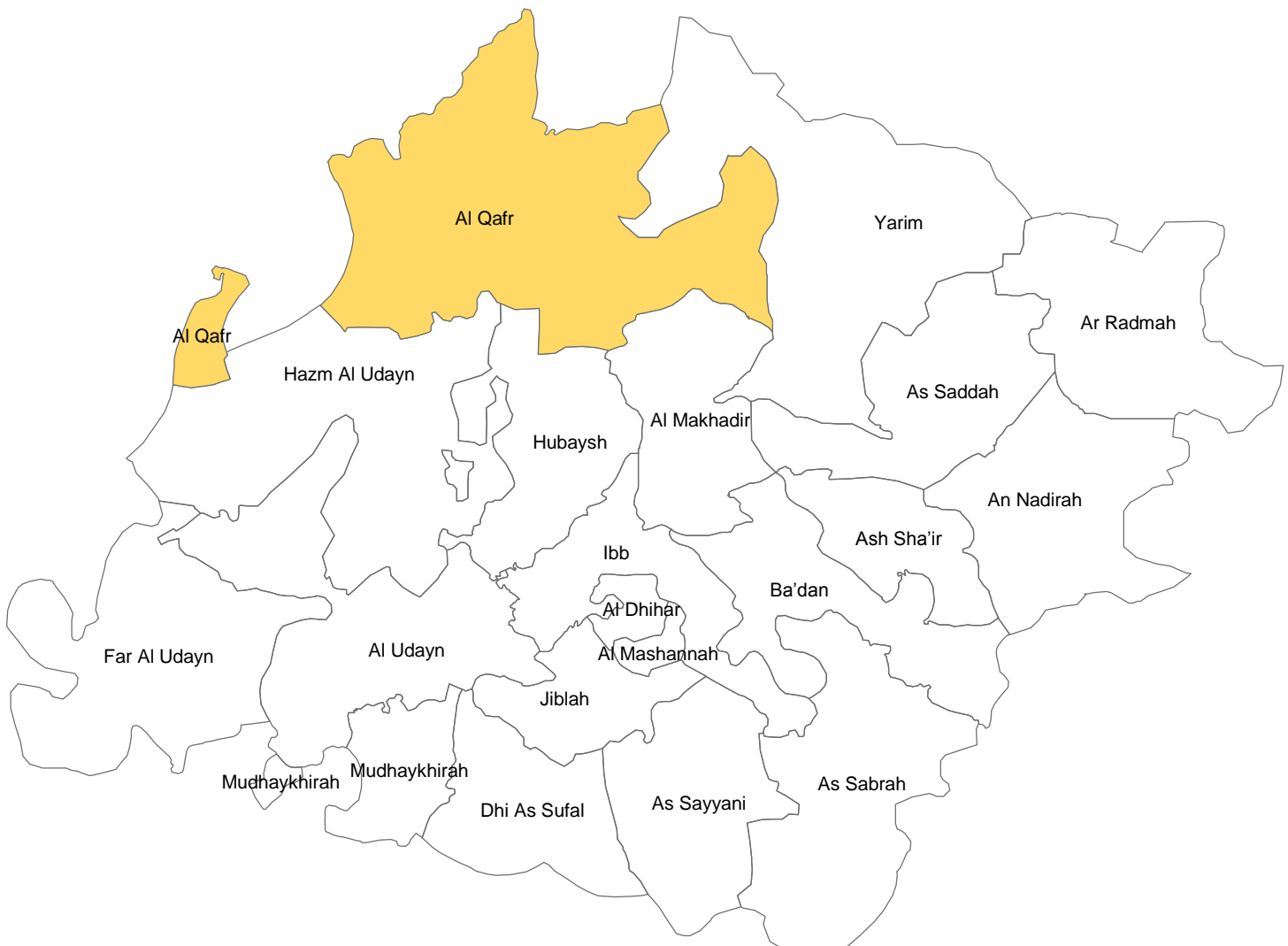


According to 2018 HNO, Hajjah Governorate is at the top 5 governorates with the highest displacement ratio. 340,000 out of 1,160,000 IDPs have moved to Hajjah governorate since 2015. Recent conflict escalation in Hajjah borders has caused more IDPs to flee into Khayran Al Muharraq district. As a result, the humanitarian situation in the district has been deteriorating significantly.

Khayran Al Muharraq district in Hajjah governorate is among the 122 WASH cluster focus districts, as well as among the 193 food insecure districts. The district was classified as IPC phase 4 where 57.5% of the population; 77,000 individuals (HC and IDPs) are in IPC 4 and 5.

Ibb governorate is located in the inland South of Yemen and is divided into 20 districts. Al Qafr is one of those districts, it is located on the north of Ibb. As of 2018, the district had a population estimated at around 142,337 inhabitants. It has an area of 640 Km<sup>2</sup> and has fifteen sub-districts. The district was classified as one of the priority districts in need for humanitarian aid of food, nutrition, health, and WASH.

Ibb governorate



Al Qafr district in Ibb governorate is among the 122 WASH cluster focus districts, as well as among the 230 health cluster focus districts. The district was classified as IPC phase 4 and 5 where 52.5% of the population; 77,000 individuals (HC and IDPs) are in IPC phase 4 and 5.

### 3. Objectives

RDP conducted this WASH needs assessment with a main objective of determining the current situation of WASH sector in the targeted districts of Khairan Al Moharraq in Hajjah governorate and Al Qafr district in Ibb governorate and to highlight the gaps between the current WASH situation as compared to sphere standards.

#### Specific Objectives:

- Define and quantify the WASH needs by providing more in-depth WASH operational information
- Provide statistical data about the WASH needs
- Capture representative views of the WASH situation from the affected population through joint consultation with them
- Assess the market for WASH supplies and resources in the targeted communities

### 4. Approaches & Methodology

The work plan started by collecting the WASH assessment tools, cluster suggested methodology, general information about the targeted districts, and the other requirements of the Needs Assessment, RDP MEAL department drafted an inception report describing the methodology and detailed work plan of the needs assessment. A meeting was arranged with all relevant departments to develop the detailed work plan.

This needs assessment involved systematic gathering and analyzing of information relating to the needs, conditions, and capacities of persons of concern in Khairan Al Moharraq and Al Qafr districts targeting diverse women, men, girls, and boys of all ages, including people with specific needs and marginalized people. The NA was conducted with the active involvement of persons of concern and with active coordination with all relevant parties:

- Local authorities
- Active local NGOs in the targeted area, to avoid over-assessment and duplication
- WASH cluster (National and Hub-level)
- Community leaders and decision makers (as part of the accountability to affected population)

This NA was conducted in accordance with the WASH cluster technical guidelines for OCHA 1<sup>st</sup> SA 2019, as well as the ISAC – Operational Guidance for Coordinated Needs Assessments in Humanitarian Crisis. Both, quantitative and qualitative research methods were considered to collect and analyze data.

#### Methodology of primary data collection:

The comprehensive WASH NA included:

- HHs Interviews
- Focus group discussions
- Key Informants Interviews
- General situation data collection
- Health and nutrition information collection (HF level)
- Water sources mapping (primary data collection) to obtain initial BoQs

The famine risk factors were included in the sampling where health and nutrition factors were assessed and samples of HHs with SAM cases were interviewed. The sample covered high land and low land areas considering the geographical factors. Water sources were identified and mapped as a baseline and to consider further assessment during the intervention.

The data was captured using both Mobile Phones and Papers. The WASH assessment tools have been designed using KoboCollect and installed into the enumerators' mobile phones to capture the data of:

- HHs interviews
- Focus group discussions

The other data collection tools were in papers.

## 5. Gender and Protection Mainstreaming

Gender and Protection aspects were mainstreamed into the needs assessment activities. The field enumerators were consisting of males and females:

- RDP trained two teams for the NA in the two districts 10 enumerators in Khayran Al Muharraq (5 male and 5 female) and 12 in Al Qafr (7 male and 5 female).
- The interviewed sample in both districts included males and females as heads of HHs. The sample included persons with specific needs and marginalized people.
- The NA highlighted potential protection issues that may encounter female headed households and the risk of responsibility of women and children in bringing water from far areas which take a long time and where they have to wait in queues to get the turn in bringing water. Queues are not separating women from men and this also make a risk of potential protection issues.
- The roles and dynamics of the people in the targeted areas were highlighted regarding responsibility between males and females in brining water and other duties of a household.
- The targeted beneficiaries will be gender specific and disaggregated.

## 6. Risk and Assumptions

According to a survey that was conducted, 62 percent of the districts in Yemen remain relatively accessible while 16 percent of the 333 districts in the country are perceived to have ‘high or extremely high access constraints’. The majority of them being in the most conflict affected governorates of Taiz, Sa’ada, Marib, Al Bayda, and Hajjah. The conflict in Hajjah is escalating and causing more harm and more IDPs to flood into nearby districts including Khayran Al Muharraq.

Access constraints in Hajjah governorate mainly fall under four categories:

- a) Restriction of movement of organization, staff and goods,
- b) Violence against humanitarian staff, assets and facilities,
- c) Interference in the implementation of humanitarian programs and,
- d) Military operations and ongoing hostilities.

The security and safety measures were taken into account when conducting the field work of this needs assessment. The team has coordinated with all relevant parties regarding this Needs Assessment and to obtain the required clearances for movement through check points.

## 7. Sample Size and Individual Selection

The sampling universe was associated with the WASH indicators aimed to be assessed. The sample was covering the 5 sub-districts of Khayran Al Muharraq and the fifteen sub-districts of Al Qafr as shown in the table below:

Khayran Al Muharraq Sub-districts	Total Population 2018 (estimated)	% of Individuals to total district population	IPC (4+5) population	# of HHs interviewed	# of individuals interviewed	% of Sample
Ad Dane'e	10,727	11%	8,719	38	435	4%
Bani Hamla	16,807	18%	13,660	40	280	2%
Sharqi Al Khamesayn	26,676	28%	21,682	42	455	2%
Gharbi Al Khamesayn	15,429	16%	12,540	47	155	1%
Masrooh	25,096	26%	20,398	20	359	1%
<b>Total</b>	<b>94,735</b>	<b>100%</b>	<b>77,000</b>	<b>187</b>	<b>1,684</b>	<b>1.8%</b>

Al Qafr Sub-districts	Total Population 2018 (estimated)	% of Individuals to total district population	IPC (4+5) population	# of HHs interviewed	# of individuals interviewed	% of Sample
Al Karaba	2,246	2%	1,215	14	131	6%
An Nakhla	2,970	2%	1,607	13	116	4%
Bani Joma'ah	7,620	5%	4,122	14	142	2%
Bani Sawi	7,512	5%	4,064	12	169	2%
Bani Saba	10,616	7%	5,743	9	87	1%
Bani Saif Al Ali	26,384	19%	14,273	21	176	1%
Bani Saif As Safil	9,380	7%	5,074	33	305	3%
Bani Omar Al-Safil	12,803	9%	6,926	7	64	0.5%
Bani Omar Al-Eali	5,081	4%	2,748	10	85	2%
Bani Mubarez	17,552	12%	9,495	18	180	1%
Bani Margham	3,895	3%	2,107	20	160	4%
Bani Muslim	17,189	12%	9,299	9	78	0.5%
Bani Mahdi	3,884	3%	2,101	18	158	4%
Hemyar	11,325	8%	6,126	18	189	2%
Madhagayn	3,883	3%	2,100	7	68	2%
<b>Total</b>	<b>142,337</b>	<b>100%</b>	<b>77,000</b>	<b>223</b>	<b>2,108</b>	<b>1.5%</b>

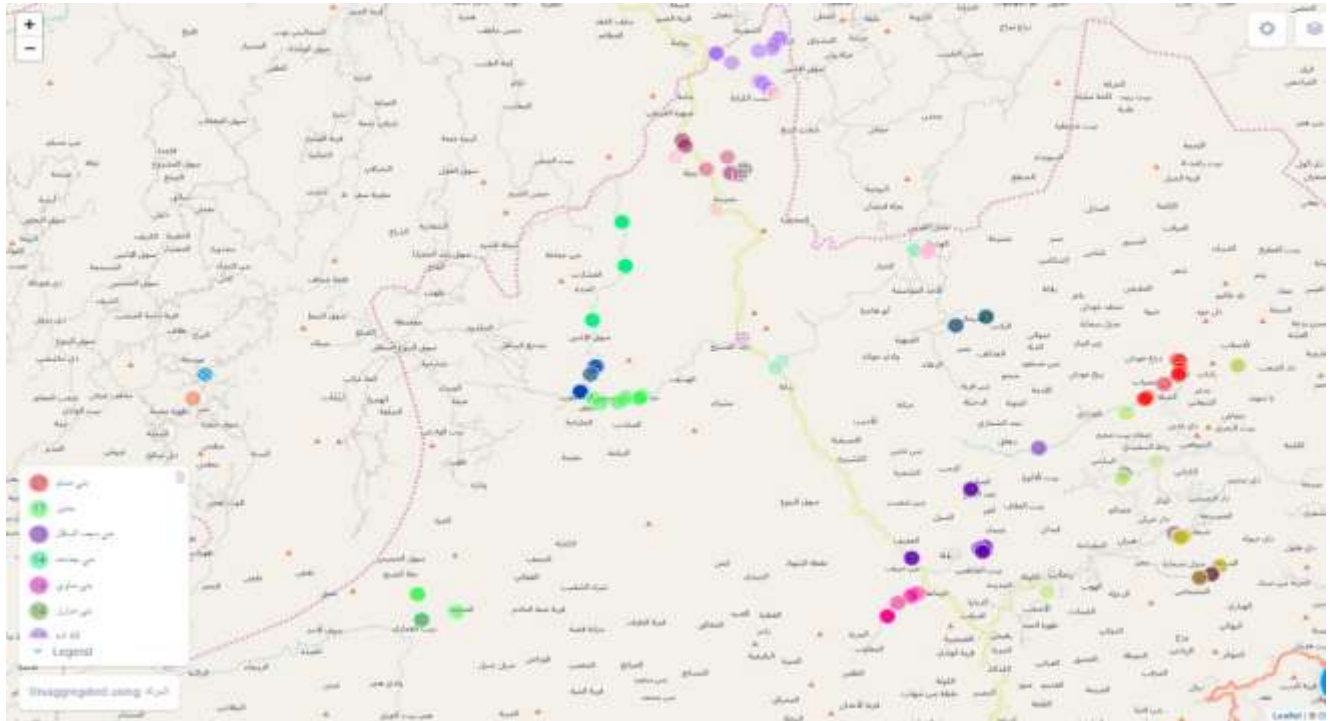
## 7.1 Field work

RDP has deployed two teams for the NA in the two districts led by RDP WASH engineers who have trained qualified field enumerators, 10 in Khayran Al Muharraq (5 male and 5 female) and 12 in Al Qafr (7 male and 5 female), to conduct the FGDs and HHs interviews. Two training sessions were conducted for the field enumerators by RDP WASH engineers, one in Khayran Al Muharraq and one in Al Qafr. The targeted locations were divided among the enumerators and a plan was set for each team. The field enumerators conducted the HH interviews and the FGDs, while RDP WASH engineers conducted the KIIs, market assessment, general information gathering, and the water sources visits and mapping.

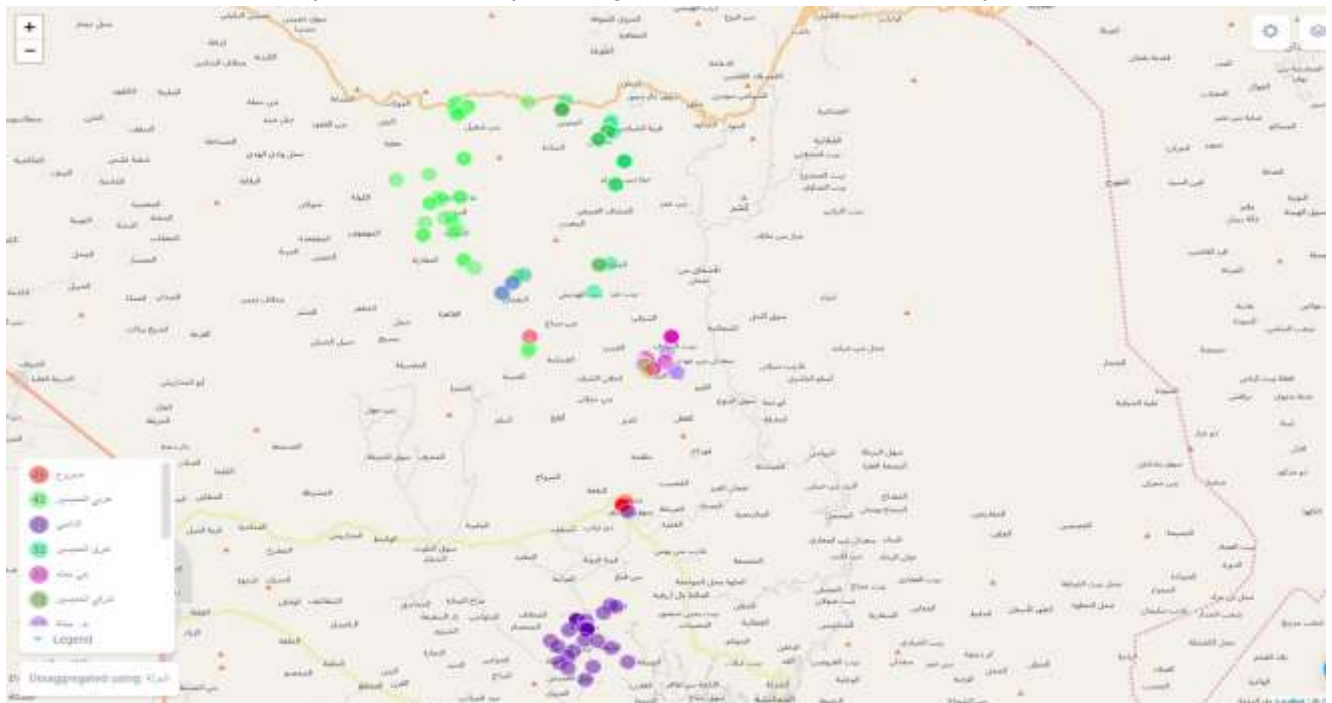
### 7.2 Coverage area

The KoboCollect tools were linked with GPS coordinates to identify the locations from where the HH interviews were conducted. The two maps below show the locations and the coverage area of the sample in both districts.

Al Qafr Coverage area of the assessment sample



Khayran Al Muharraq Coverage area of the assessment sample





### 7.3 Data collection from the field and quality control

This was through continuous monitoring of the enumerators team from the day of field survey until the end of the data collection period. Direct communication was ensured using all available means to deliver accurate data at the required quality and to review data and forms from enumerators.

### 7.4 Data management and analysis

RDP MEAL department has designed the assessment tools in KoboCollect and shared it with WASH program for testing and approval of the tool. The collected data from the field into the KoboCollect database has been reviewed on daily basis. An Excel database has been previously designed with certain formulas to obtain the required assessment results accumulatively and in a real-time manner. The KoboCollect tools were designed to be error free with predefined drop down lists and obligatory options to be filled. They were also designed to reject any illogical entry of data. Nevertheless, whenever a misleading data was entered, the data management officer notice it and provide feedback to the field enumerators to correct the data.

Data were analyzed in a district and sub-district level for more detailed and clear view of the figures and to identify the neediest sub-districts for WASH services.

## 8. Key Findings and Results

The most important findings and results from the needs assessment of the two districts regarding Water, Sanitation, and Hygiene are mentioned here in a district level and the selected locations for intervention are highlighted:

### 8.1 Khayran Al Muharraq district

#### Water:

- Up to 56% of population in Khayran Al Muharraq get water from unprotected wells 60% of which are having issues relating to taste, appearance or smell of the water they obtain. Only 27% are treating their drinking water using: water filters (58%), chlorine tablets (14%), and boiling water (28%). The remaining 73% of HHs don't treat their drinking water mainly due to lack of treatment materials (53%) and lack of knowledge (29%).
- The average person uses from 15-40 liters of water per day according to sphere standards. In a district level, 62% of HHs are using less than 15 litter/person/day and 35% of HHs use between 15-40 litter/person/day which is much less than the minimum sphere standards. Only 3% of HHs use more than 40 litter/person/day. This means that the whole district is in acute need of water supply.
- In a sub-district level, 80% of HHs in Sharqi Al Khamesayn and 27% of HHs is Gharbi Al Khamesayn use less than 15 litters/person/day. In Gharbi Al Khamesayn, which was selected for the intervention, 100% of people don't have enough eater to use. In a district level, 62% of HHs are using less than 15

litter/person/day and 35% of HHs use between 15-40 litter/person/day which is much less than the minimum sphere standards.

- 62% of HHs don't treat water because they don't have the required materials to treat water. 33% of HHs don't know how to treat water. The need for awareness and water filters and chlorine is very obvious in a district level.
- 65% of HHs lack enough water for HH needs of cleaning and other uses and they adjust by: reducing drinking water 30% of HHs, reducing hygiene water 37%, and reducing cleaning water 43%.
- HHs spend a lot of time to bring water. Women and children are the HHs members responsible for bringing water. In a district level, only 32% of HHs spend less than 30 minutes to bring water, while 20% of HHs spend 1-2 hours to bring water and 42% spend between 30 minutes and 1 hour to bring water.
- 97% of HHs have a problem with collecting the water in terms of far distance and queuing time.
- Women and children are the ones collecting water from water sources. Women are not separated from men and children don't go to schools due to this issue
- The water infrastructure in the urban area is not operating for more than 7 years while the rural areas don't have sufficient number of water points to cover the need

### Sanitation

- In a district level, 42% of HHs don't have access to functioning latrines, while 44% don't have enough latrines; one for 20 individuals according to sphere standards. Only 14% have enough latrines in the whole district.
- 42% of HHs use flush latrine to the open (unimproved) and 36% use pit latrine-open/without slab (unimproved)
- Waste water and sanitation is a main issue in Khayran Al Muharraq district. In a district level, 74% of households have issues with waste water around their houses and environment.

### Hygiene

- 94% of HHs leave their garbage in public areas. 54% of HHs don't have soap and 28% said that they had soap, but the interviewer did not see it, while only 18% of HHs have soap. The main reason for not having soap for 42% of HHs was because they can't afford it.
- 99% of HHs don't have hand washing facilities.
- 98% of HHs did not receive any hygiene promotion messages in the last year.

## 8.2 Al Qafr district

### Water:

- Up to 41% of population in Al Qafr district get water from unprotected wells and 18% obtain it from boreholes. 57% of HHs are having issues relating to taste, appearance or smell of the water they obtain. Only 19% are treating their drinking water while 81% don't. 63% of those who don't purify their drinking water don't have any materials of for water purification.
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- 37% of HHs members in a district level spend between 30 minutes and 1 hour, and 24% of HHs members spend between 1-2 hours to go to the main water point, fetch water, and return.
- 97% of HHs have a problem with collecting the water in terms of far distance and queuing time
- Women and children are the ones collecting water from water sources and they spend where women are not separated from men and children don't go to schools due to this issue. People use different coping strategies to adopt with lack of drinking water. A significant percentage of people drink water that is usually used for cleaning or other purposes than drinking and reduce drinking water consumption.

### Sanitation

- 30% of HHs don't have access to functioning latrines, while 10% don't have enough latrines; one for 20 individuals according to sphere standards. 60 % of HHs have enough latrines, but they are not in good conditions.
- 32% of HHs use flush latrine to the open (unimproved) and 25% use pit latrine-open/without slap (unimproved)
- 78% of HHs have visible wastewater around their houses

### Hygiene

- 61% of HHs leave their garbage in public areas. 35% of HHs don't have soap and 57% said they have soap, but the interviewer did not see it, while only 8% of HHs have soap. The main reason for not having soap for 30% of HHs was because they couldn't afford it.
- 91% of HHs don't have hand washing facilities.
- 86% of HHs did not receive any hygiene promotion messages in the last year.
- Most of HHs cannot afford buying the basic hygiene items of soap and detergents.

## 9. Analysis and Demonstration

This section explains the findings and the analysis of the collected data in a district and sub-district level. This is to provide analysis and interpretation of the obtained findings including tables and graphs demonstrating these results to help and assess decision makers prioritize the needs and decide what activities should be included in the intended project/s. Analysis will be ordered according to the sections on the HH interviews tool and the other tools will follow:

### 9.1 Khayran Al Muharraq district

The data analysis of the General Situation, HHs interviews, FGDs, KIIs and their recommendations for the inventions in Khayran Al Muharraq district is demonstrated below for each section of the HH interview form. The very important sections are highlighted with more briefing and demonstration to reflect the actual situation in a sub-district level.

#### 9.1.1 General Situation data

RDP WASH engineers have collected general information about the district using a customized tool. The information were collected from different locations and sources including health facilities and community leaders. The data included health, nutrition, and humanitarian general information summarized as follows:

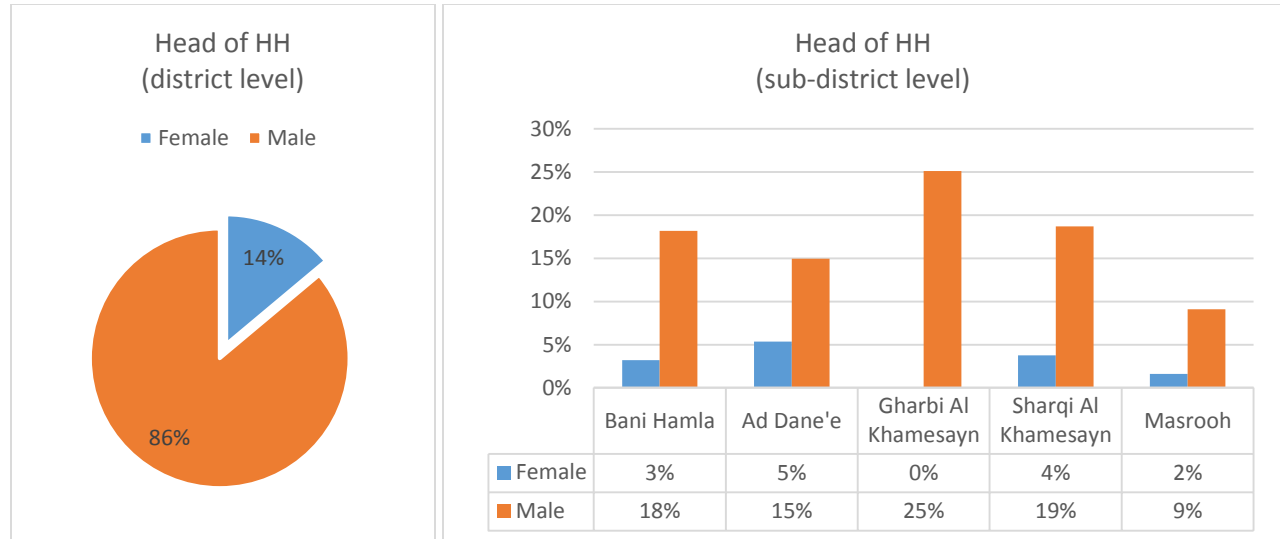
- The district needs are not covered by NGOs. No NGO is working there to provide WASH services as the obtained data indicates.
- All sources of information mentioned that the sub-districts are in need for emergency interventions including but not limited to WASH interventions and services.
- The sources indicated that the need is high for outbreak responses, income generation response, water, hygiene, and sanitation response and awareness.
- The recommendations included:
  - o Water services for HHs and rehabilitation of water schemes
  - o Solutions for sanitation facilities
  - o Distribution of water filters and chlorine tablets to treat drinking water
  - o Hygiene kits distribution
  - o Latrines construction and rehabilitation
  - o Distribution of new water jerry cans for HHs

9.1.2 HH Interviews:

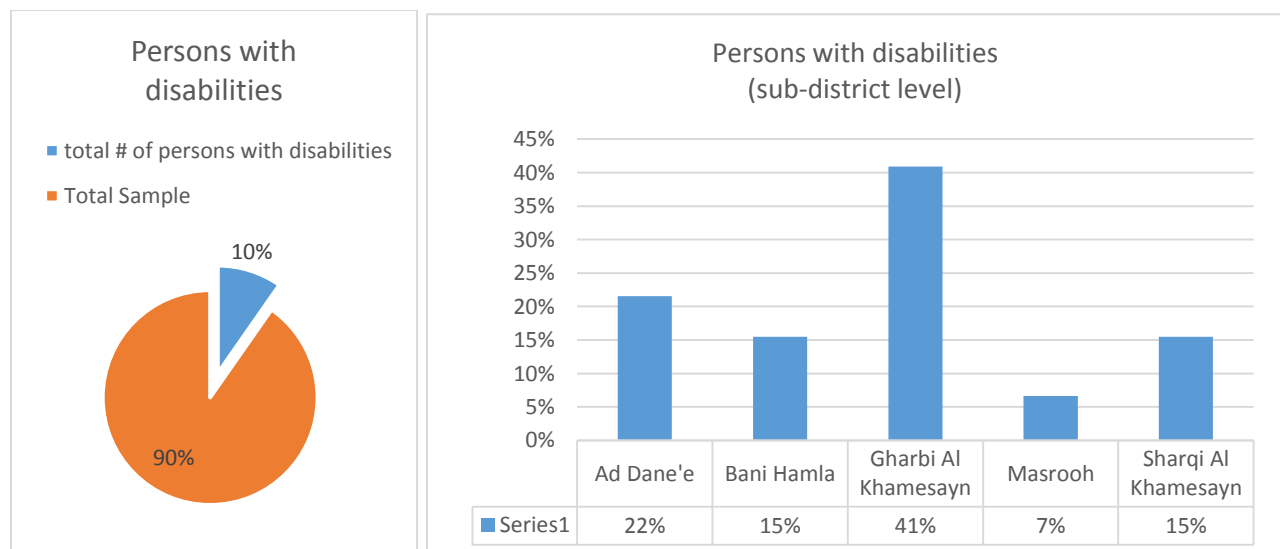
The data analysis of the household interviews is demonstrated below for each section of the HH interview form. The very important sections are highlighted with more briefing and demonstration to reflect the actual situation in a sub-district level.

9.1.2.1 General Information

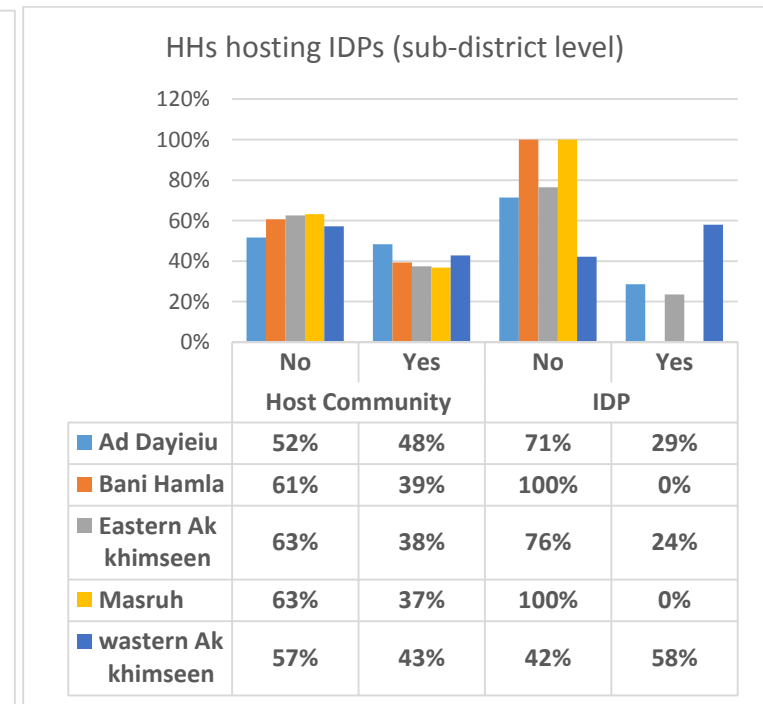
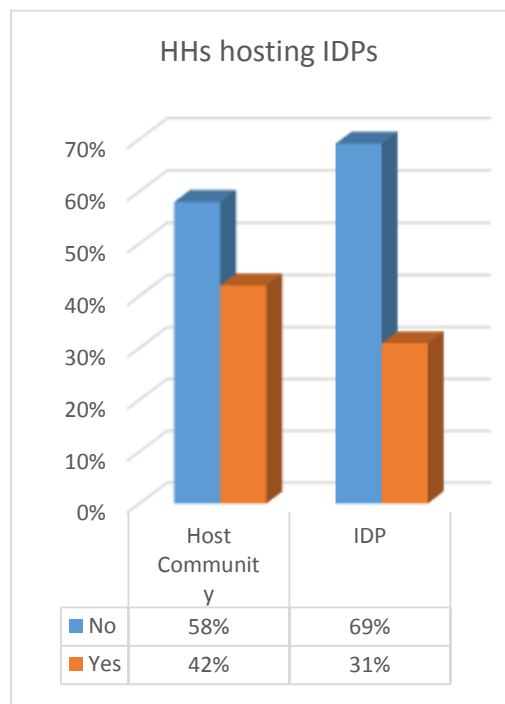
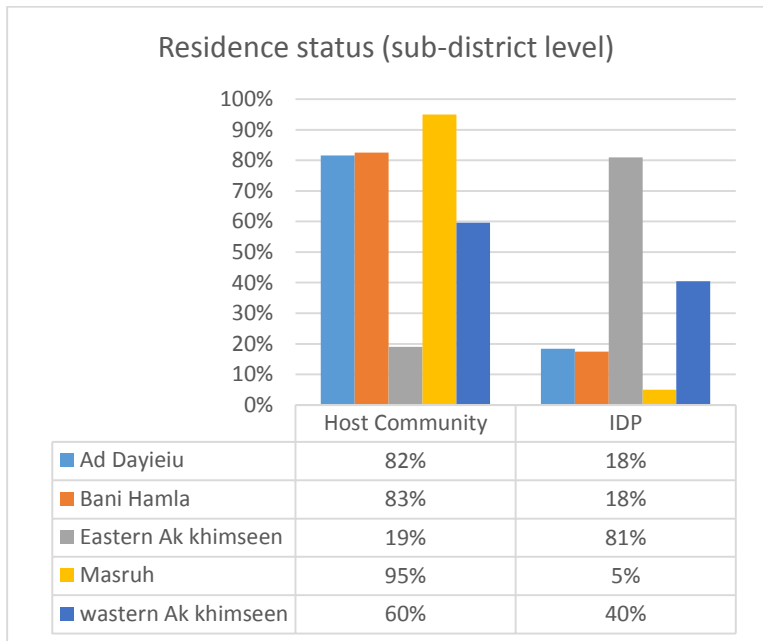
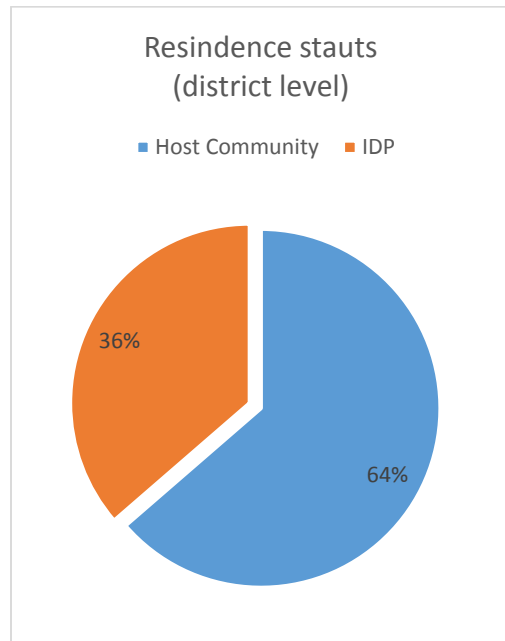
14% of HHs in Khayran Al Muharraq are headed by women. This percentage is significant in Ad Dane’e sub-district which is an indication of potential protection issues of female headed households.



Almost 10% of the district inhabitants are people with disabilities. The significant percentage of persons with disabilities in the district of Khayran Al Muharraq, especially in Gharbi Al Khamesayn sub-district might be related to diseases spreading from contamination and poor sanitation situation in this sub-district. The figures below show the district and sub-district percentage of people with disabilities:

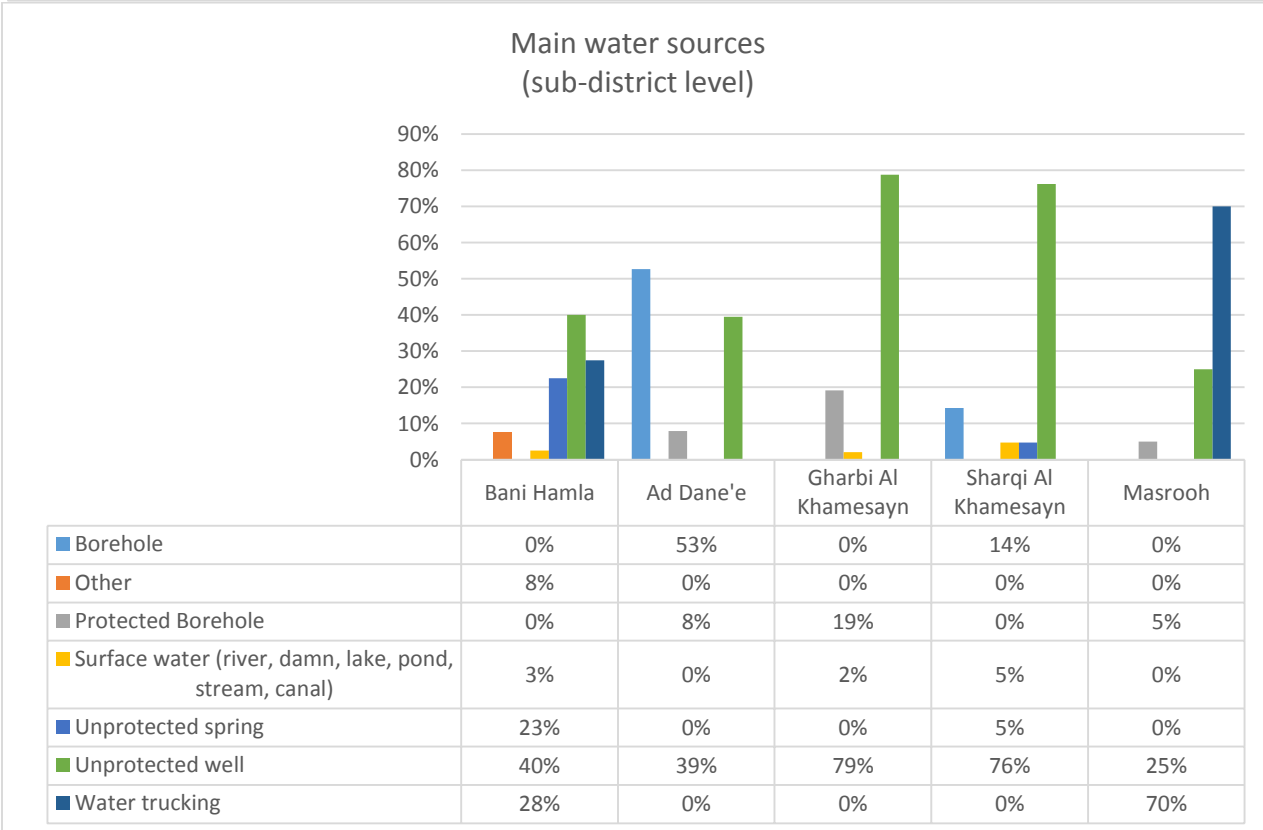
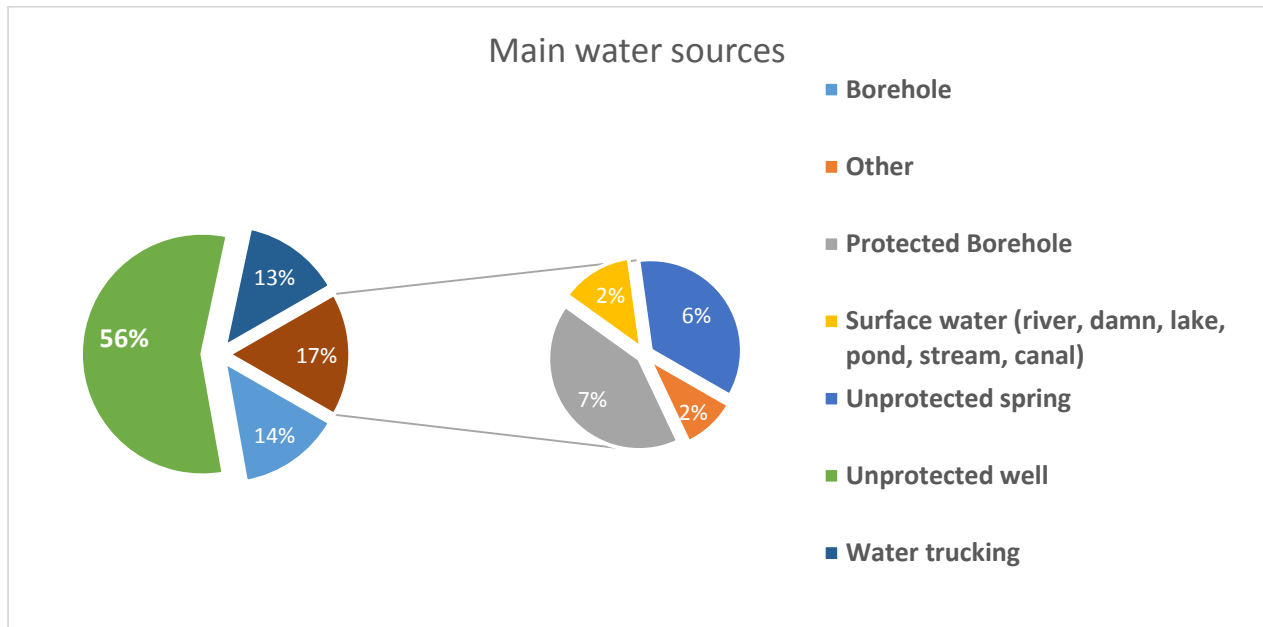


36% of the interviewed samples are IDPs, 31% of which are hosting other IDPs families. 58% of the remaining 64% interviewed sample were host community HHs hosting IDPs in their houses. Recent conflict escalation in Hajjah has caused more IDPs to flood into Khayran Al Muharraq district. The increased number or resident per HHs caused a dire need for water and sanitation services and has increased the demand and load on the available water sources and sanitation facilities.

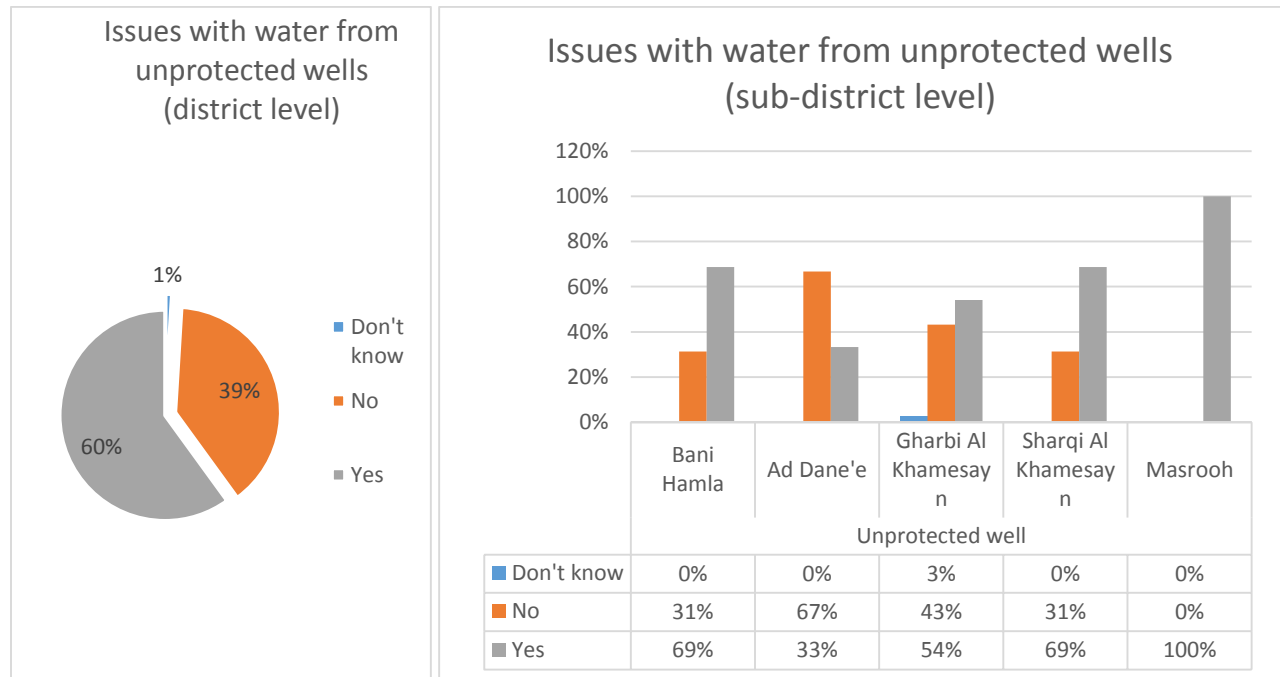


9.1.2.2 Water

It was concluded from the obtain data and results of the analysis that the main water source in the district is unprotected wells 56%. The highest percentage of people depending on unprotected wells mainly are in Gharbi Al Khamesayn and Sharqi Al Khamesayn respectively as shown in the sub-district figure below:



60% of people reported that they have issues with the water they obtain from wells in terms of smell, color and taste. This was concluded when filtering the data and analyzing those depending mainly on unprotected wells as a main source for drinking water. The below figures show this in more details:

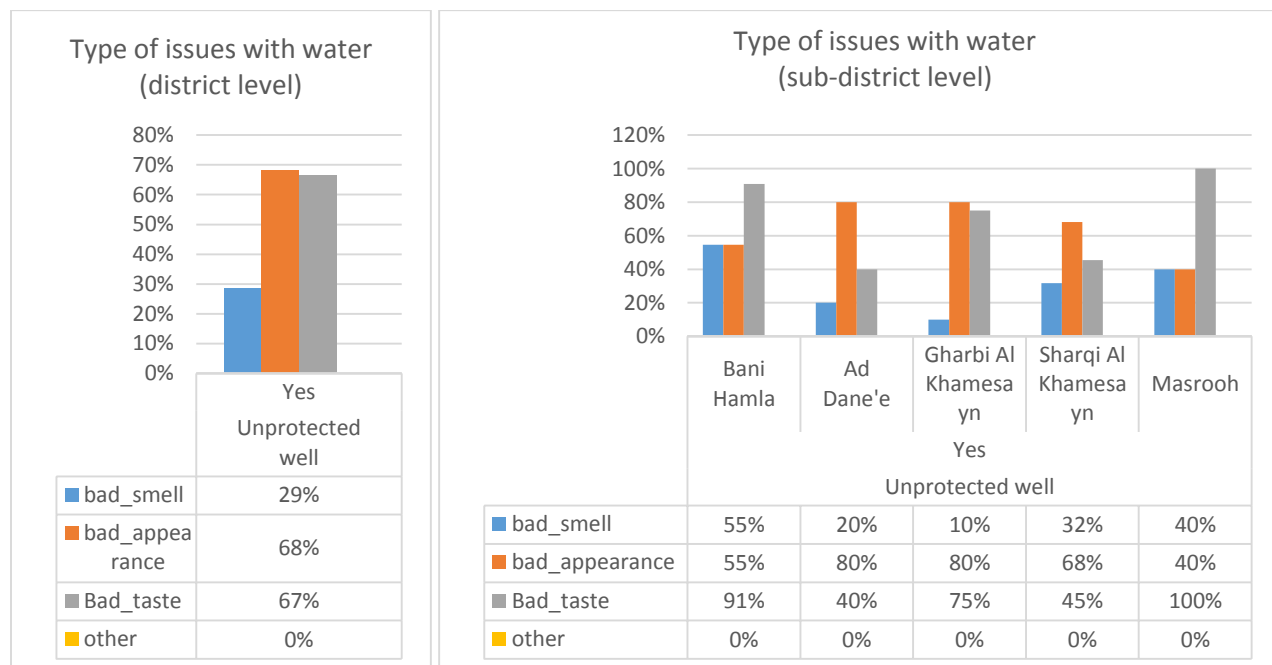


This ratio is very significant in Masrooh and Ad Dane’e, but the number of unprotected wells in Gharbi Al Khamesayn and Sharqi Al Khamesayn are much higher. Thus, the 69% and 54% percentages of these two sub-districts respectively represent a higher number of people having issues with the smell, color and taste of their water which they obtain from the unprotected wells.

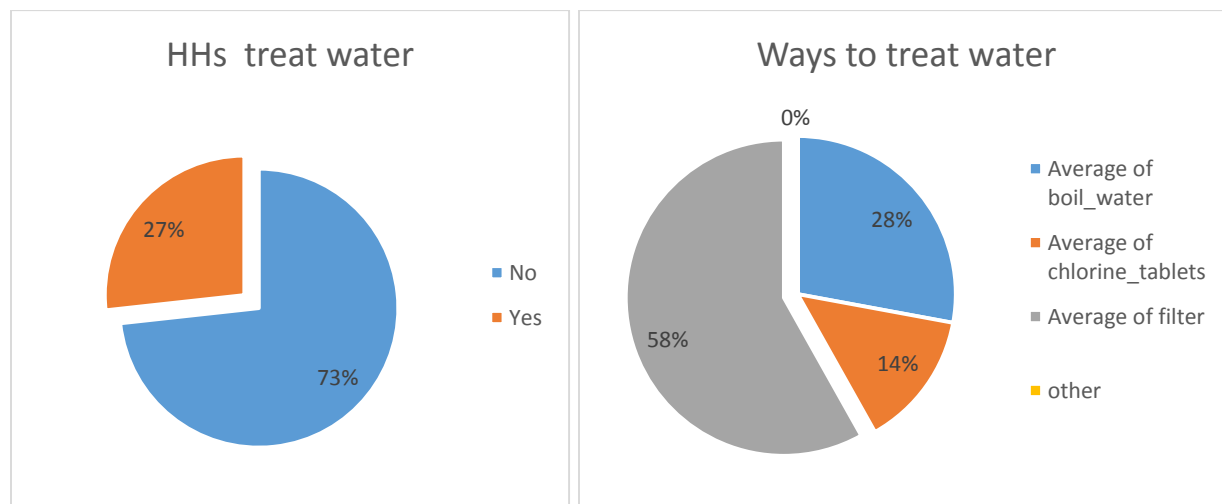
Field visits reports by our WASH engineers to these two sub-district have also confirmed that the unprotected wells in the two mentioned sub-districts are in a very bad situation and people are drinking contaminated water as shown in the photos section of this report.

The taste and appearance are the main two issues with un-protected wells’ water in the district.



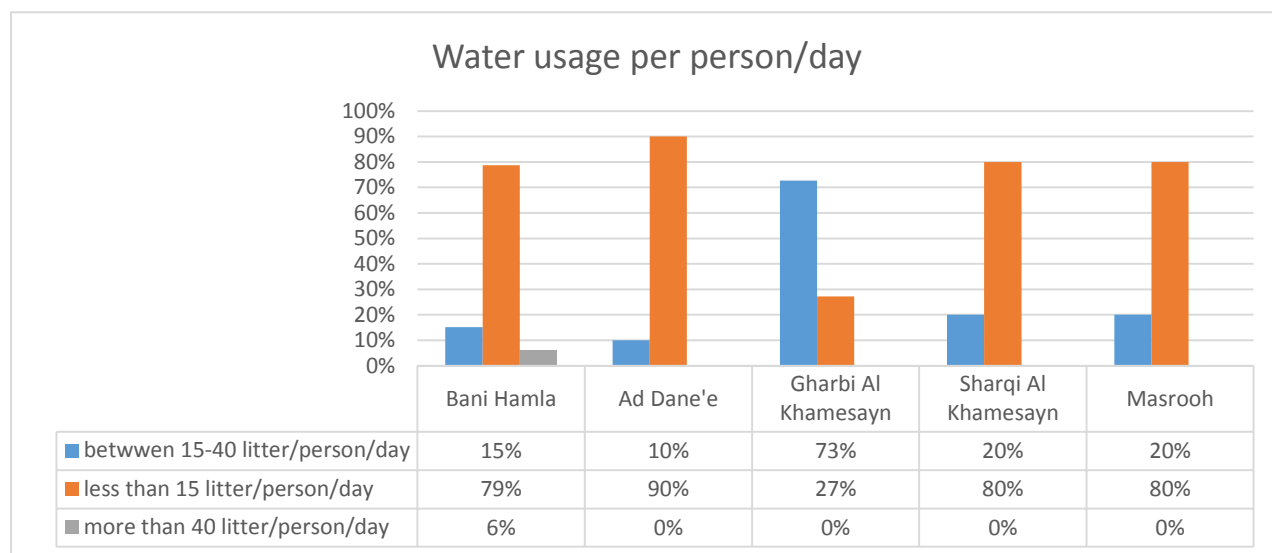
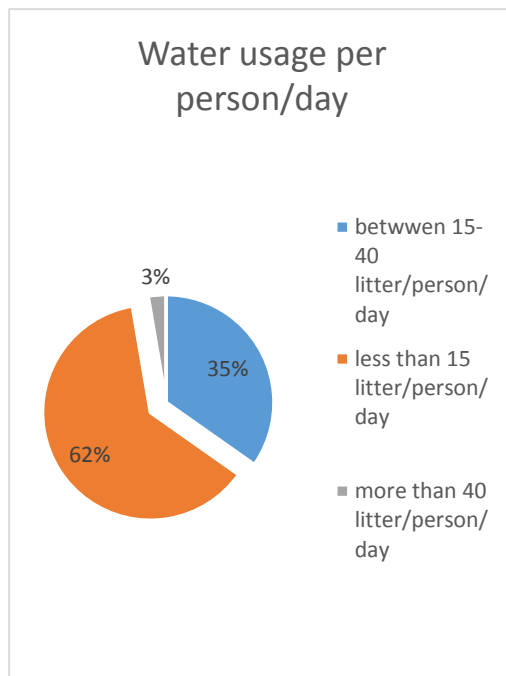


73% of HHs in the district of Khayran Al Muharraq don't treat their water. 58% of HHs use water filters to treat their water. This is an indication for the need for the water filters as a method for interventions to respond to the water treatment need.

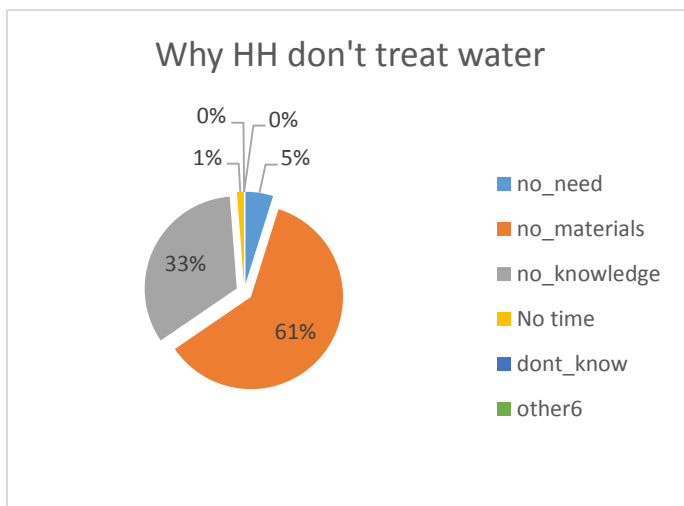


The average person uses from 15-40 liters of water per day according to sphere standards. In a district level, 62% of HHs are using less than 15 litter/person/day and 35% of HHs use between 15-40 litter/person/day which is much less than the minimum sphere standards. Only 3% of HHs use more than 40 litter/person/day. This means that the whole district is in acute need for water supply.

In a sub-district level, 80% of HHs in Sharqi Al Khamesayn and 27% of HHs in Gharbi Al Khamesayn use less than 15 litters/person/day. In Gharbi Al Khamesayn, which was selected for the intervention, 100% of people don't have enough water to use. 73% of HHs have between 15-40 litters/person/day and 27% use less than 15 litters/person/day.



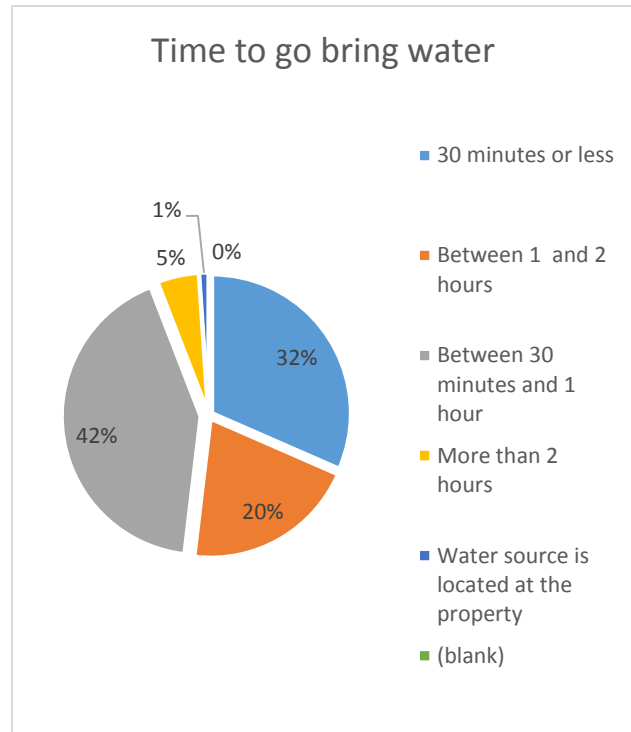
62% of HHs don't treat water because they don't have the required materials to treat water. 33% of HHs don't know how to treat water. The need for awareness and water filters and chlorine is very obvious in a district level. The sub-district level also show the same need especially in the sub-districts of Sharqi Al Khamesayna and Gharbi Al Khamesayn.



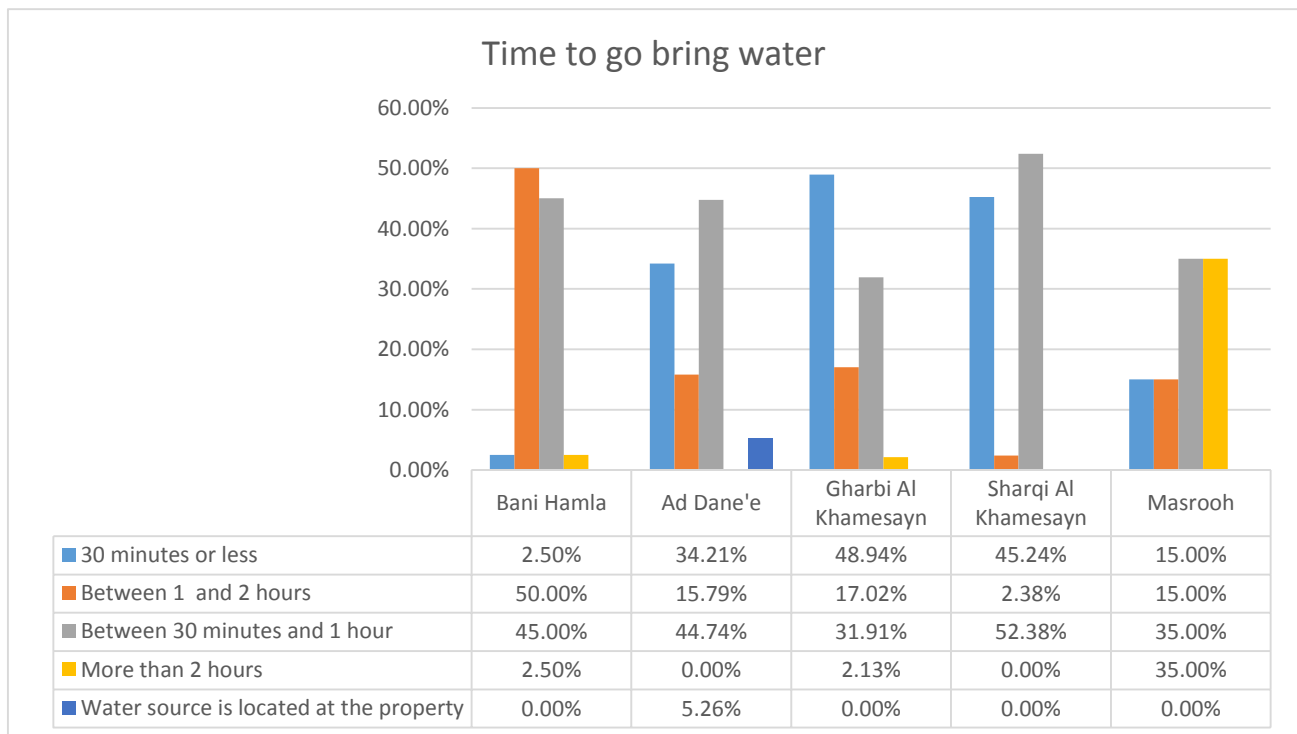
HHs spend a lot of time to fetch water. Women and children are the responsible HHs members for bringing water.

In a district level, only 32% of HHs spend less that 30 minutes to bring water, while 20% of HHs spend 1-2 hours to bring water and 42% spend between 30 minutes and 1 hour to bring water.

In a sub-district level, a significant percentage of HHs in each sub-district spend between 30 minutes to 1 hour to bring water from the available water sources. In Gharbi Al Khamesayn sub-district, 49% spend 30 minutes of les to bring water, but the available water sources there are in a very bad condition as illustrated in the above mentioned analysis.



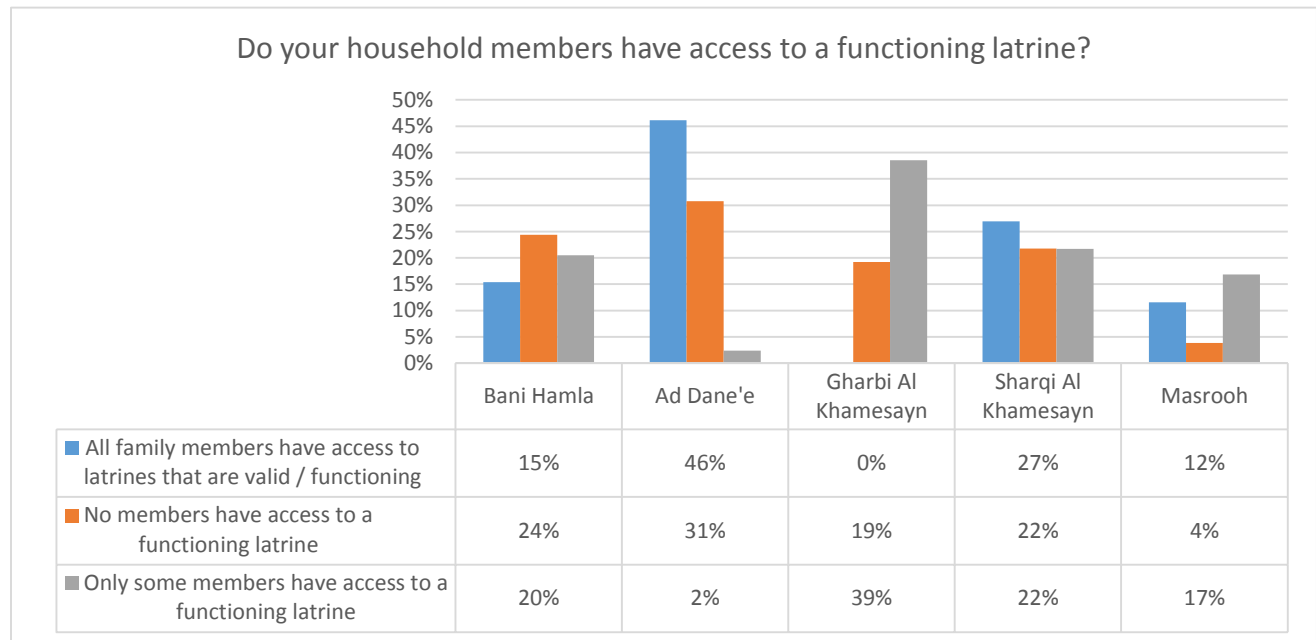
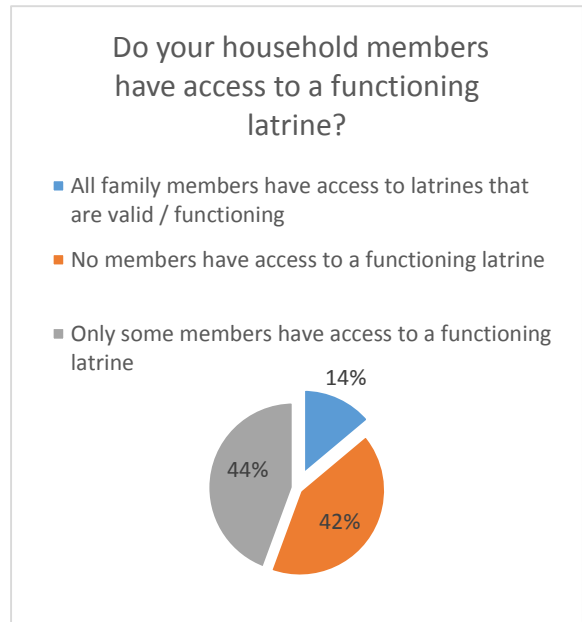
97% of HHs have a problem with collecting the water in terms of far distance and queuing time.



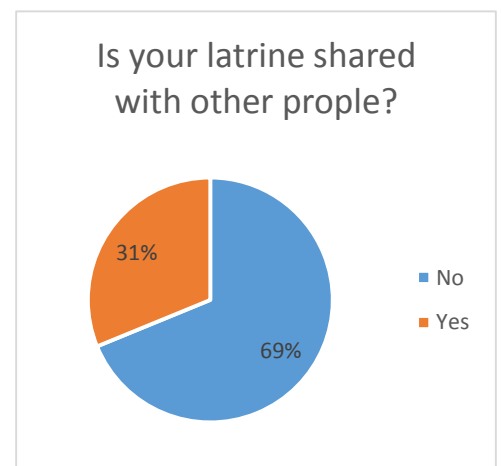
9.1.2.3 Sanitation

In a district level, 42% of HHs don't have access to functioning latrines, while 44% don't have enough latrines; one for 21 individuals according to sphere standards. Only 14% have enough latrines in the whole district.

In a sub-district level, the acute need is obvious in Gharbi Al Khamesayn sub-district. You can see in the figure below that none of the households have access to enough latrines. 19% of HHs in Gharbi Al Khamesayn sub-district don't have access to latrines at all, while 39% of HHs have access to latrines that is shared with other people in the open.

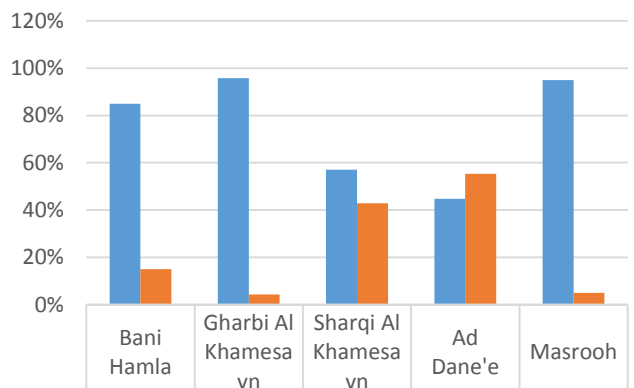


People in Khayran Al Muharraq, especially in Gharbi Al Khamesayn and Sharqi Al Khamesain use common latrines in the open which are shared with other people. RDP WASH engineers have visited some of the locations where they documented some of these latrines which are very unsuitable for use. Please see photos (2), (3) and (4) in the photos section.



Waste water and sanitation is a main issue in Khayran Al Muharraq district. In a district level, 74% of households have issues with waste water around their houses and environment. In a sub-district level, it is very obvious that Gharbi Al Khamesayn and Masrooh are the two main sub-district most affected by the sanitation in in the open problem.

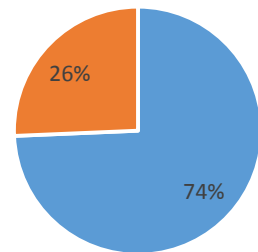
### Visible waste water issue



■ There is sometimes visible wastewater in the vicinity of my household (1-2 times per month)	85%	96%	57%	45%	95%
■ No problem	15%	4%	43%	55%	5%

Visible wastewater in the vicinity (30 meters or less) of your house in the last 30 days

- There is sometimes visible wastewater in the vicinity of my household (1-2 times per month)
- No problem



9.1.2.4 Hygiene

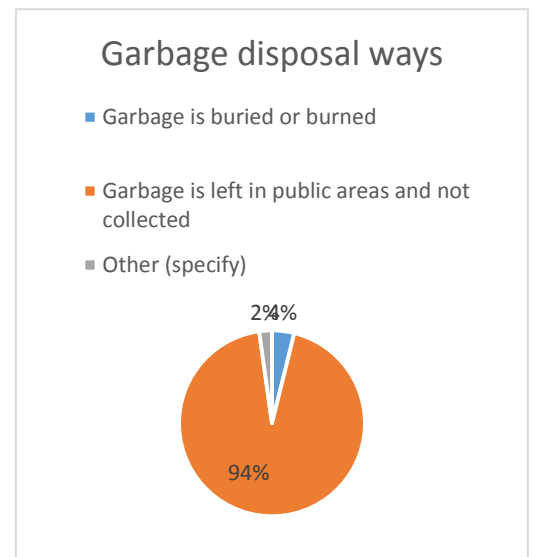
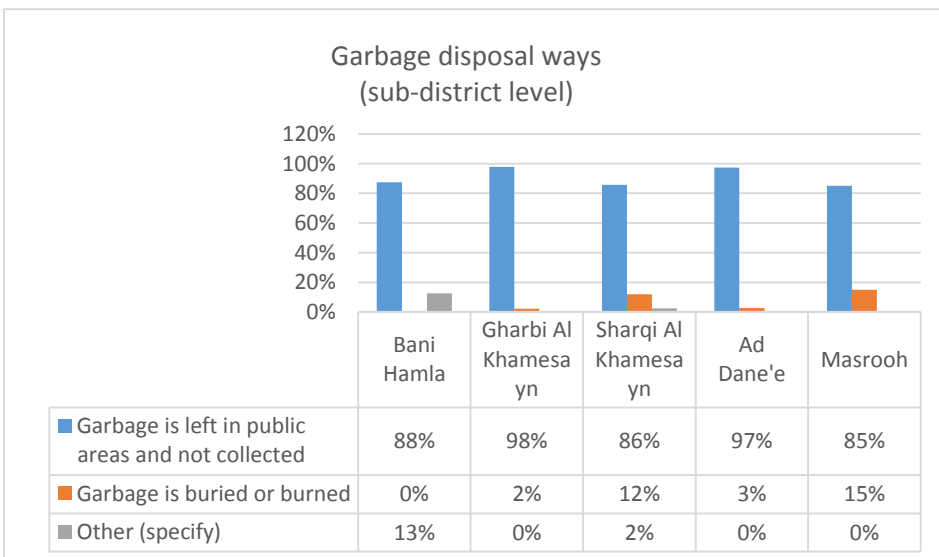
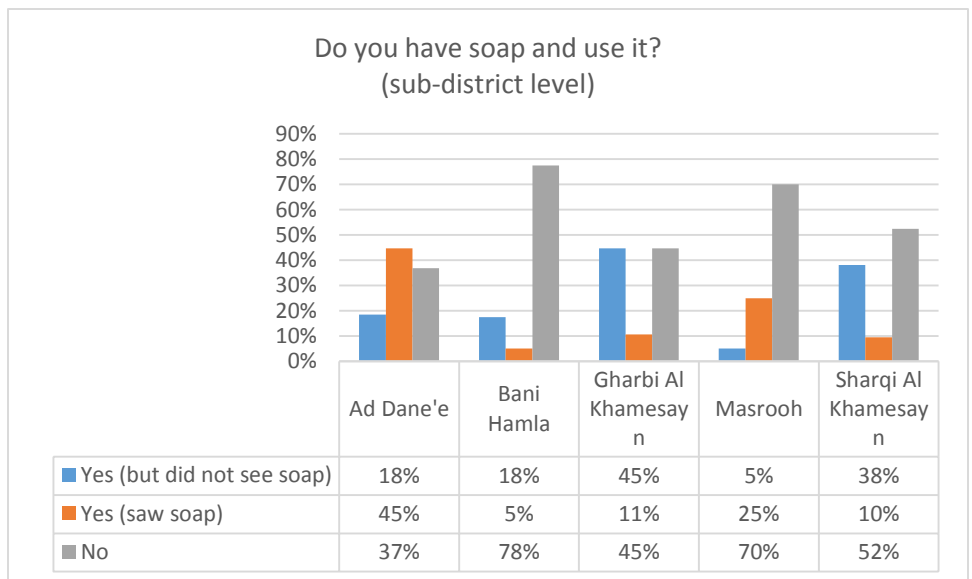
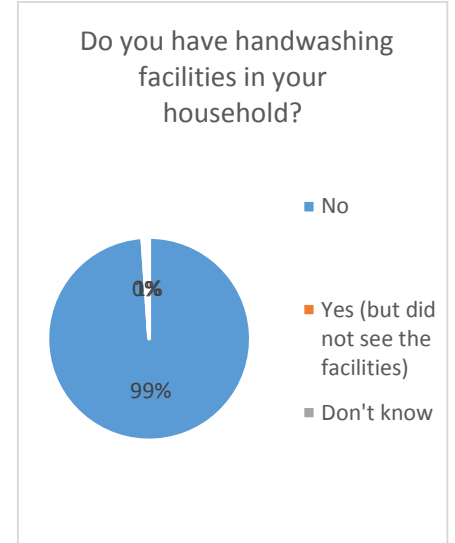
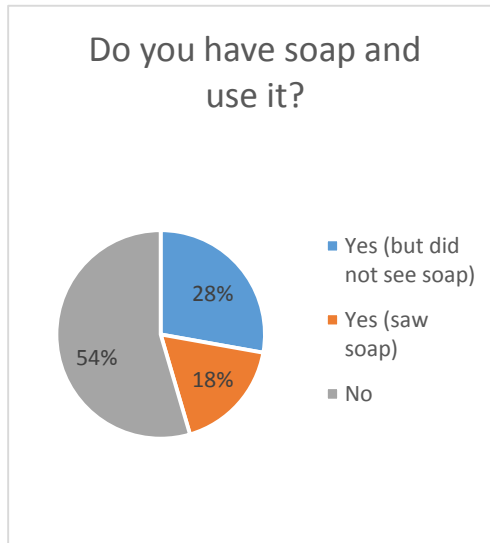
99% of HHs don't have hand washing facilities in a district level.

In a sub-district level, the analysis show that Bani Hamla and Masrooh are the two sub-districts where 78% and 70% of HHs respectively don't have soap at all in their houses. The main reason for not having soap for 42% of HHs was because they couldn't afford it.

94% of HHs in the district leave their garbage in public areas

In a sub-district level, Gharbi Al Khamesayn is the most affected sub-district of the garbage problem and thus it is recommended to have cleaning campaigns as part of the intended intervention.

98% of HHs did not receive any hygiene promotion message in the last year.



### 9.1.3 FGDs

The field enumerators conducted 14 FGDs in the five sub-districts of Khayran Al Muharraq. The FGDs data was analyzed and they **have confirmed the finding of the individual HHs interviews findings**. The following are the highlights and important notes concluded from people's discussions:

- The main water source for most of the HHs is also unprotected wells which were used for the last 30 days by 64% of the FGDs participants. The unprotected wells are in a very bad condition and in very far distances from the residence of most HHs.
- 78% of participants confirmed that people are having issues with the taste, smell, and appearance of the water they obtain.
- 89% of participants confirmed that most of people don't treat drinking water. Almost half of the population use boiling water as a mean for treatment and some of them use water filters for water purification. The main reason for not treating water was due to lack of required materials or knowledge of how to treat it.
- It was stated by the community of Al Qafr in general that access to water is changing since sometimes it is easy to reach water sources and sometimes it is not.
- People use different coping strategies to adopt with lack of drinking water. A significant percentage of people drink water that is usually used for cleaning or other purposes than drinking and reduce drinking water consumption.
- Garbage is left in the open and most of areas of the community have many piles of garbage everywhere on the surroundings of houses and public areas.

### 9.1.4 KIIs

RDP WASH engineers conducted two Key Informants Interviews in the district of Khayran Al Muharraq with the District Director and one of the Shaikhs of the district. Below is a summary of the conducted KIIs and their highlights:

- In general, water sources are not enough for drinking and other daily uses of HHs in the district, especially after the recent displacements into the district.
- Water sources are very far to reach by people and they use animals to transport water and walk for long distances to fetch water and return. Women are responsible for bringing water and there is no separation between women and men in water sources queues.
- The number of latrines in the district is very limited and most of the villages don't have latrines. Almost all of the available latrines are not safe especially for women. There are no doors or roofs for these

latrines. Due to this issue, people have adopted by defecation in the open which is a big problem in the district.

- Women are not feeling safe to use these latrines and there are many reported incidents of harassment and emotional abuse regarding using the latrines which women face from their family members and other people outside.
- Most of HHs cannot afford buying the basic hygiene items of soap and detergents.

### 9.1.5 Recommendations

After deep analysis from the different data sources and analysis and demonstration above, we have concluded the following recommendations for the kind of activities and services to be provided in the intended intervention:

- The first recommendation is to show the need in the district and the acute need for WASH services there which might not be covered by the intended intervention by RDP upcoming project.
- Conduct a feasibility study to evaluate the appropriateness of the intervention of rehabilitation of water schemes and choose the suitable place to conduct it.
- Rehabilitation of one water scheme in the sub-district of Gharbi AlKhamesayn as a first stage (pilot) and extend the intervention to other sub-districts as the priority indicates in the analysis
- Provision of communal water tanks to be linked with the water scheme which will be rehabilitated in Gharbi Al Khamesayn sub-district to be in closer locations to beneficiaries
- Provision of water filters for HHs for treatment of drinking water
- Implement a water quality surveillance and mapping of water sources
- Construction of family latrines and rehabilitation of existing latrines
- Distribution of basic and consumable hygiene kits for HHs
- Conduct cleaning campaigns in the selected sub-districts
- Conduct hygiene KAP study in the selected sub-districts as a pilot study to measure the impact of the intended interventions to the knowledge, attitude, and practices of beneficiaries



## 9.2 Al Qafr district

The data analysis of the General Situation, HHs interviews, FGDs, KIIs and their recommendations for the interventions in Al Qafr district is demonstrated below for each section of the HH interview form. The very important sections are highlighted with more briefing and demonstration to reflect the actual situation in a sub-district level.

### 9.2.1 General Situation

RDP WASH engineers have collected general information about the district using a customized tool. The information were collected from different locations and sources including health facilities and community leaders. The data included health, nutrition, and humanitarian general information summarized as follows:

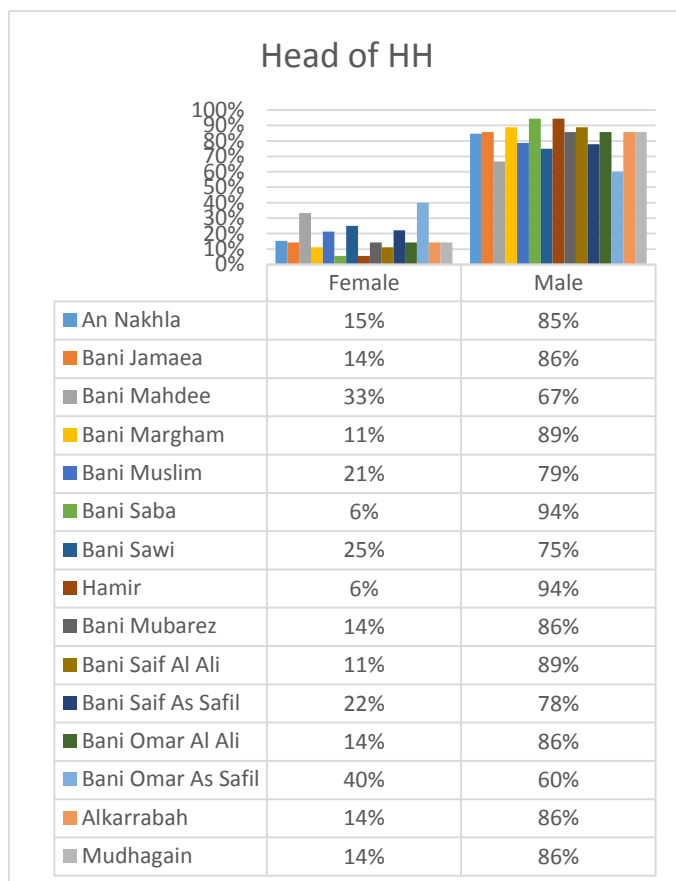
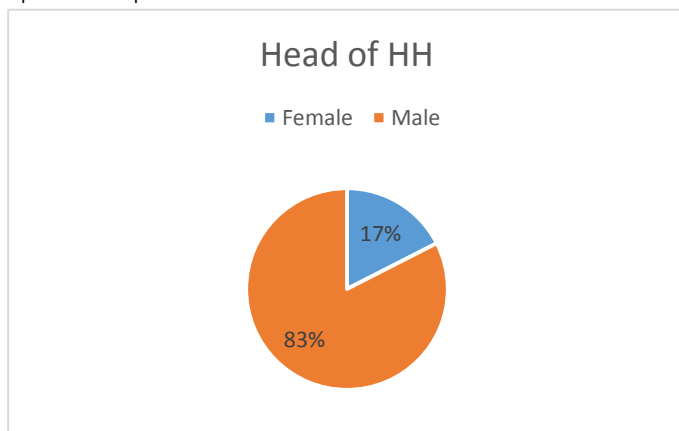
- The district needs are not covered by NGOs. No NGO is working there to provide WASH services as the obtained data indicates.
- All sources of information mentioned that the sub-districts are in need for emergency interventions including but not limited to WASH interventions and services.
- The sources indicated that the need is high for outbreak responses, income generation response, water, hygiene, and sanitation response and awareness.

### 9.2.2 HHs Interviews

#### 9.2.2.1 General information

17% of HHs in Al Qafr are headed by women. 4% of the interviewed sample were IDPs, while the other 86% are host community. The number or resident per HHs caused a dire need for water and sanitation services and has increased the demand and load on the available water sources and sanitation facilities.

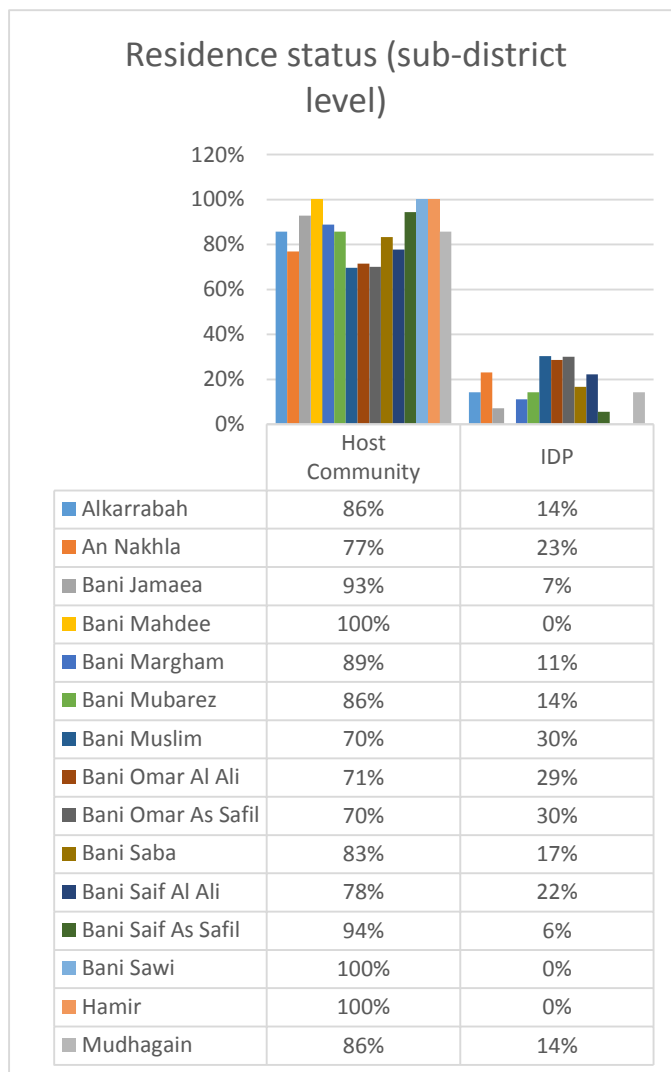
In a sub-district level, this percentage is significant in Bani Omar Al-Safil sub-district which is an indication of potential protection issues of female headed households.



14% of the interviewed sample were IDPs, while the other 86% are host community. The number of resident per HHs caused a dire need for water and sanitation services and has increased the demand and load on the available water sources and sanitation facilities.

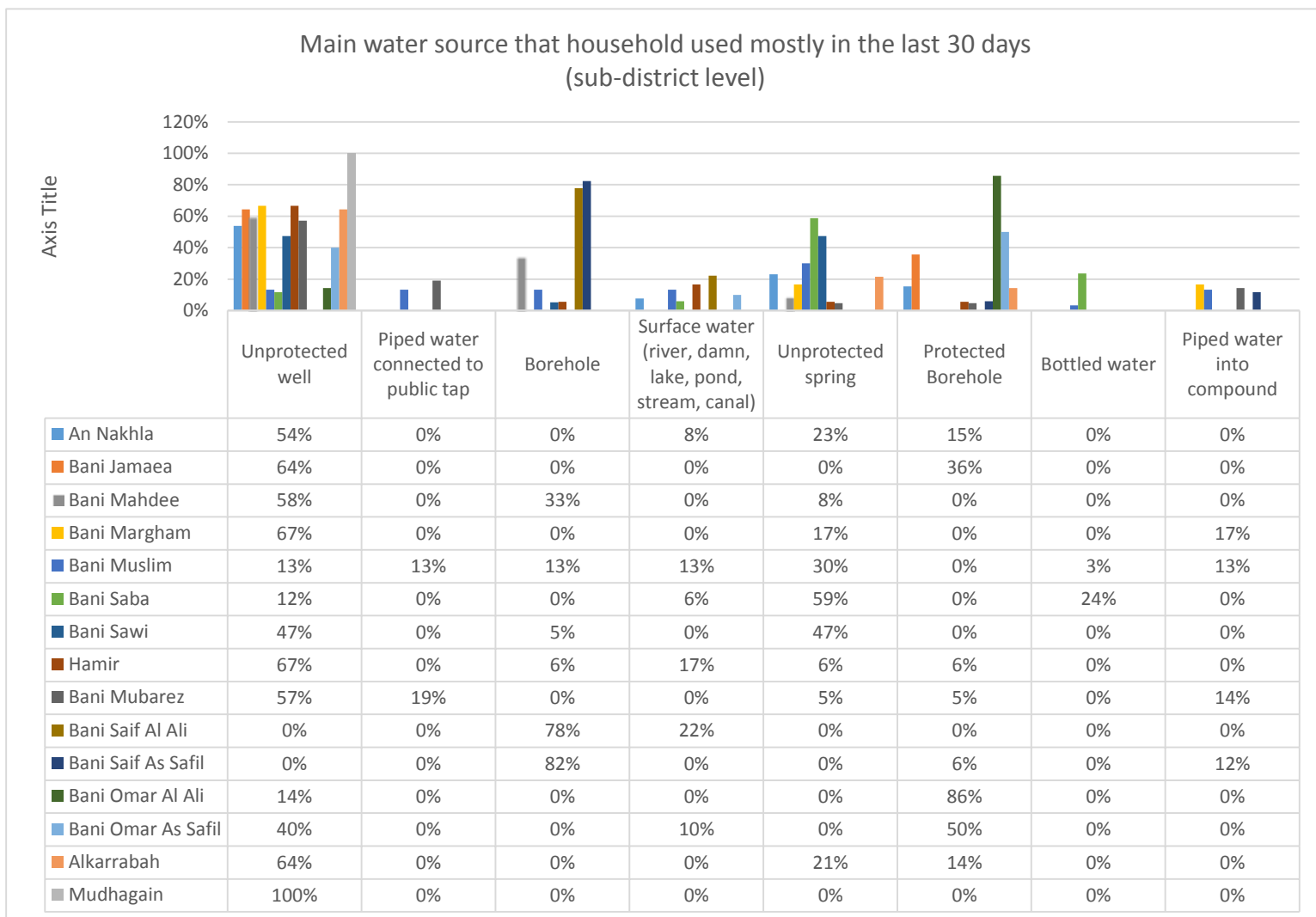
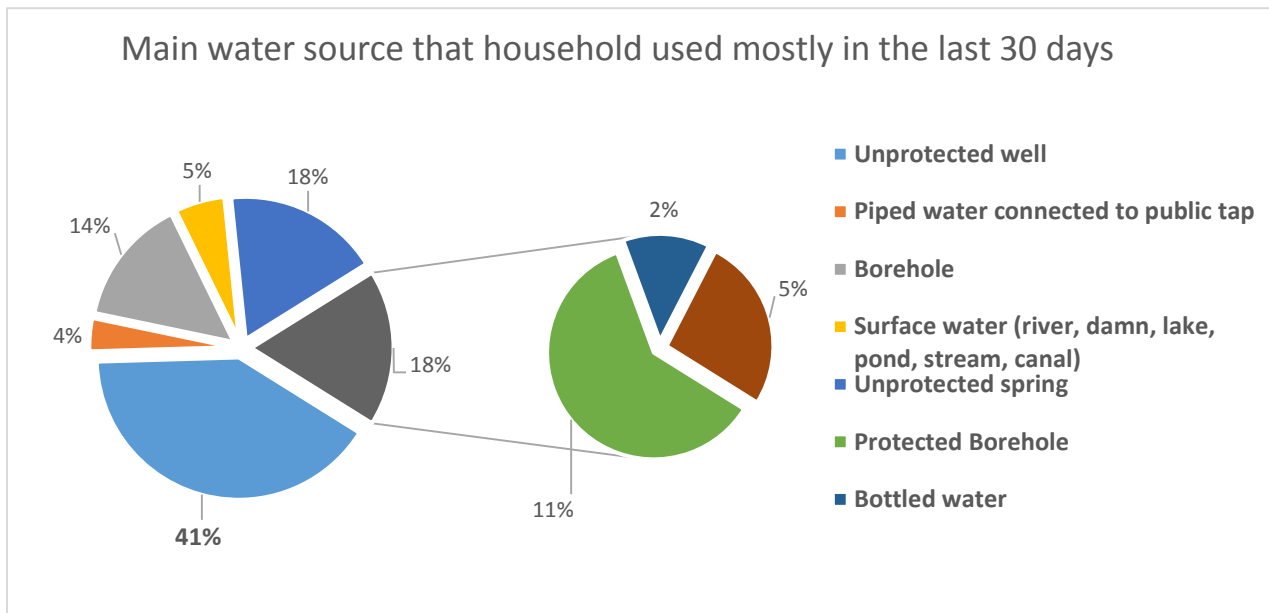
Family size in Al Qafr district is large. As you can see in the table below that 87 HHs of the 223 HHs have 9,10,11,12 and 13 family members per HH. This makes the need for water and sanitation facilities per HHs is larger than expected.

# of family members per HH	# of HHs
2	4
4	4
5	10
6	12
7	23
8	39
9	30
10	32
11	15
12	24
13	16
14	4
15	2
16	2
17	1
18	1
20	3
25	1
<b>Grand Total</b>	<b>223</b>

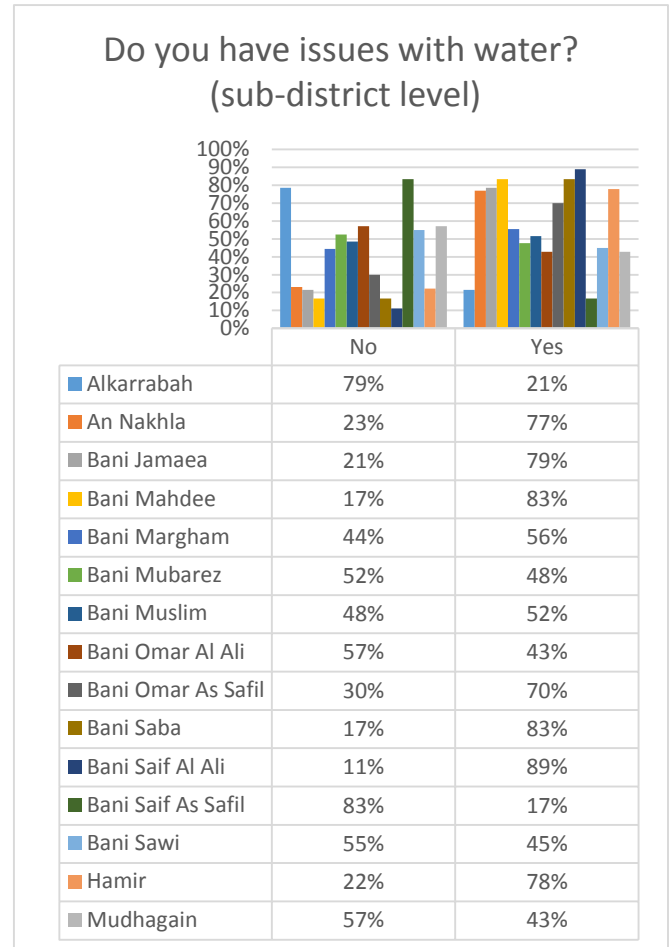
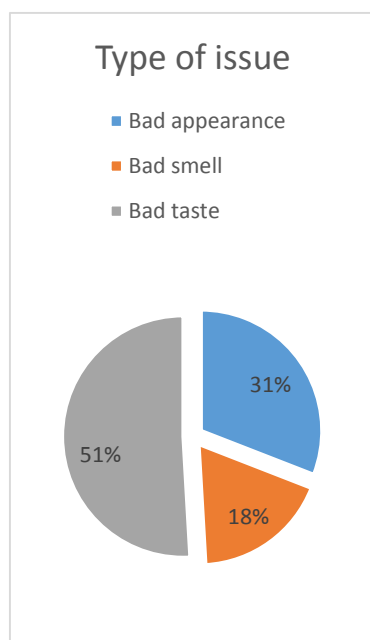
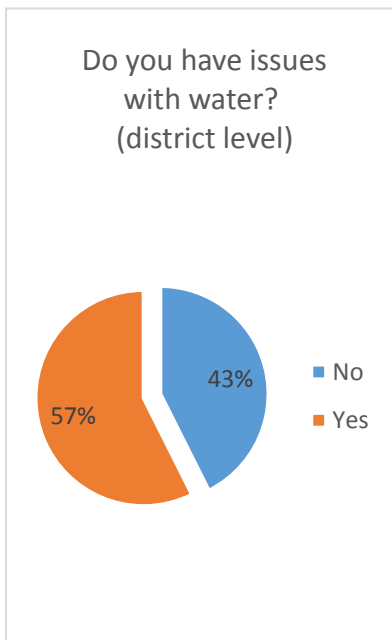


### 9.2.2.2 Water

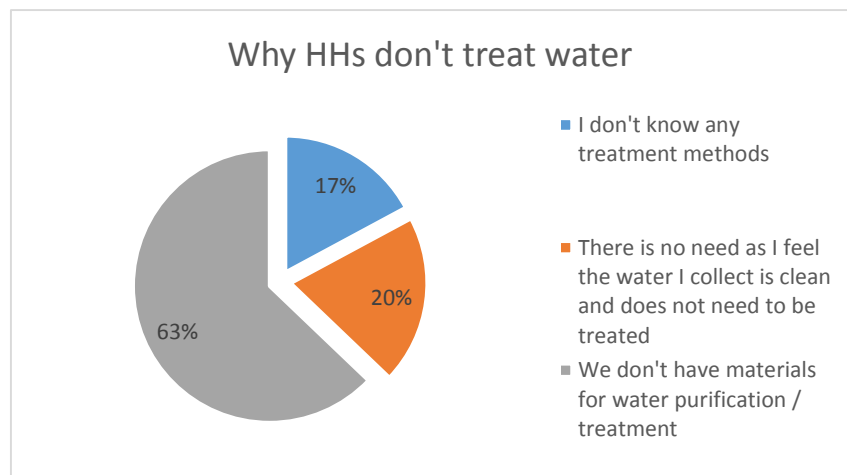
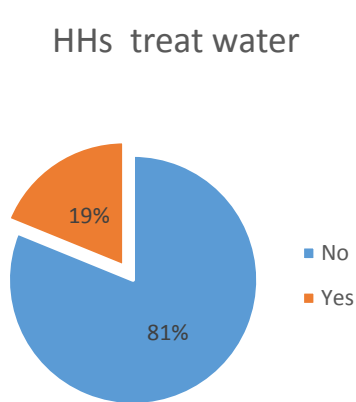
It was concluded from the obtained data and results of the analysis that the main water source in the district is unprotected wells with a percentage of 41% and boreholes 18%. In a sub-district level, Madhagain sub-district is 100% depending on unprotected wells, Bani Mahdi with a percentage of 58% and Bani Saif Al Ali is depending on boreholes with a percentage of 78%. This is detailed in the figures below:



57% of HHs in the district reported that they have issues with the water they obtain from wells in terms of smell, color and taste. 51% of HHs had issue with the taste of water. In a sub-district level, most of the issues are in Bani Saif Al Ali and Bani Mahdi sub-districts where they rely mainly on unprotected wells and boreholes. The figures show this in more details:



The field visits of RDP WASH engineers to the water sources in Al Qafr indicated that the most three sub-districts where most of the unprotected wells are in bad condition are: Bani Mahdi, Madhagain and Bani Saif Al Ali sub-districts. 81% of the HHs don't treat their drinking water as illustrated in the figure below where 63% of those who don't treat their water don't have the materials for water purification as shown below.

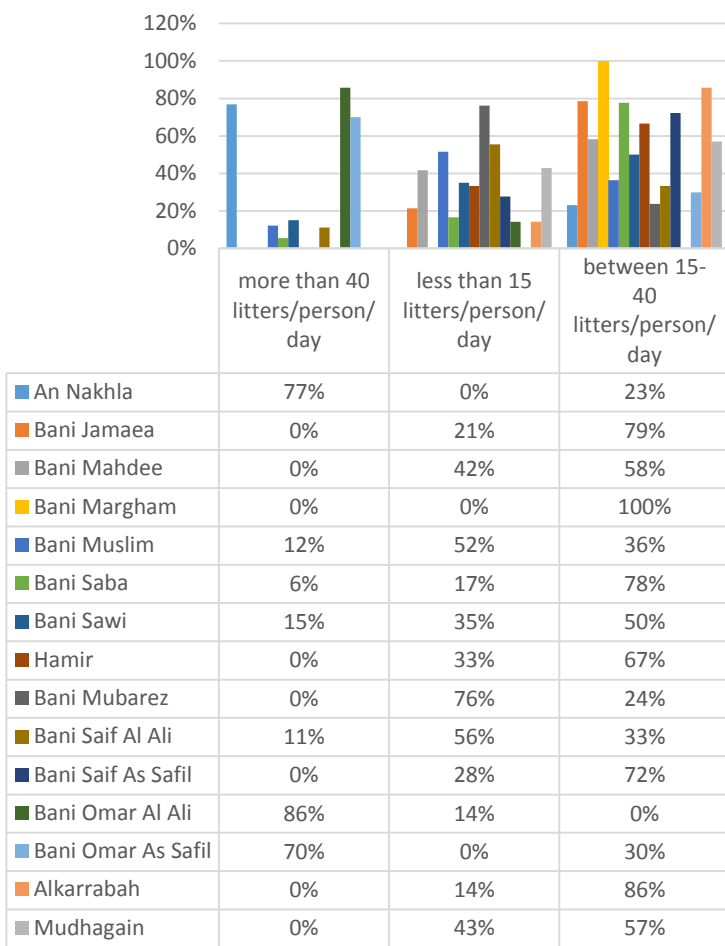


The average person uses from 15-40 liters of water per day according to sphere standards.

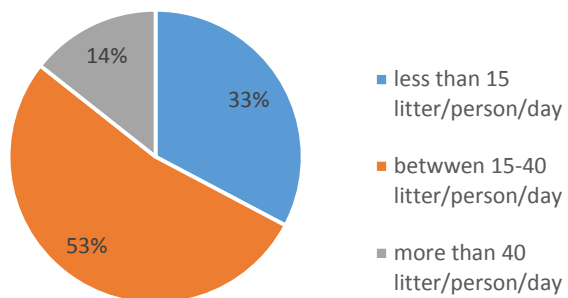
In a district level, 33% of individuals don't have enough water to use per day. In a sub-district level, the three chosen sub-districts are having this issue significantly with 56% in Bani Saif Al Ali, 43% in Madhagain, and 42% in Bani Mahdi sub-districts.

HHs also have issues with time spent to bring water. The field visits and conducted FGDs showed that women and children are the responsible HHs members for bringing water. 37% of HHs members in a district level spend between 30 minutes and 1 hour to bring water, and 24% of HHs members spend between 1-2 hours.

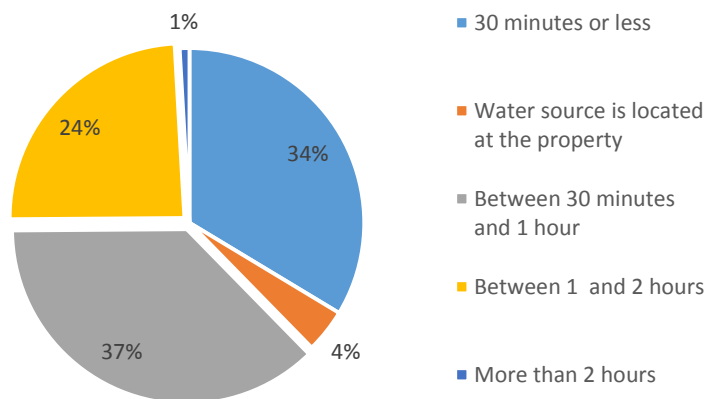
Daily consumption of water (sub-district level)



water consumption



Time of bringing water

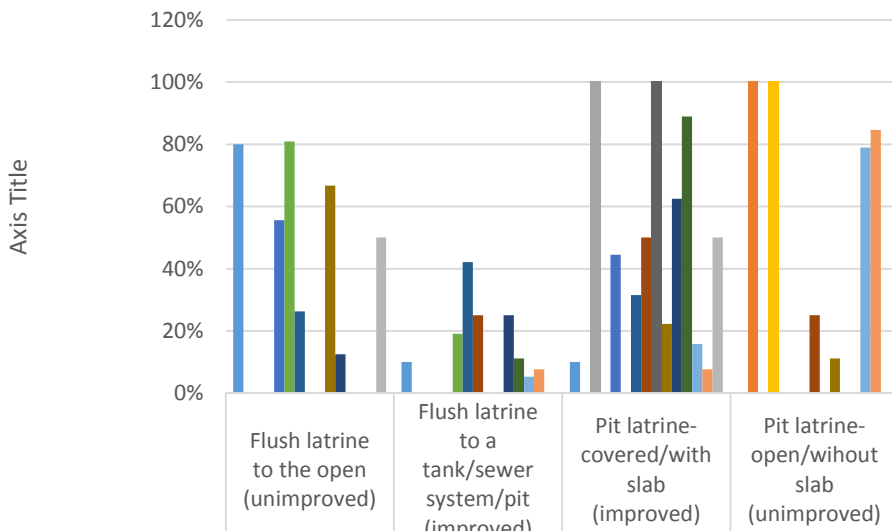


9.2.2.3 Sanitation

In a district level, 30% of HHs don't have access to functioning latrines, while 10% don't have enough latrines; one for 20 individuals according to sphere standards. 60% have enough latrines in the whole district but they are not in good conditions. The statistics showed that most of the latrines, 25% are Pit latrines-open without slab (unimproved), and 32% are flush latrines to the open (unimproved) in a district level.

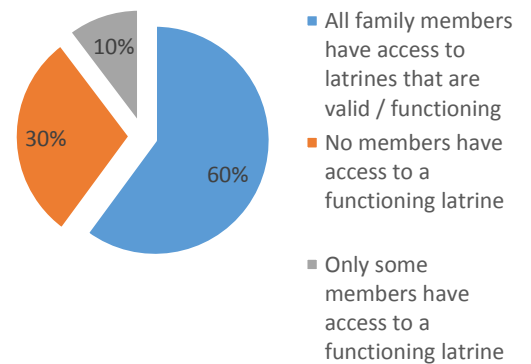
In a sub-district level, the acute need is obvious in Bani Mahdi sub-district. You can see in the figure below that none of the households have access to enough latrines. 19% of HHs in Bani Hadi sub-district don't have access to latrines where 100% of HHs use pit latrines to the open (unimproved). More elaboration can be obtained from the figures below:

What type of latrine do your household members have access to? (sub-district level)

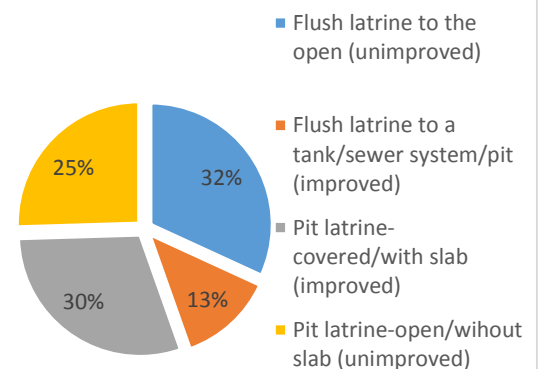


Sub-district	Flush latrine to the open (unimproved)	Flush latrine to a tank/sewer system/pit (improved)	Pit latrine-covered/with slab (improved)	Pit latrine-open/without slab (unimproved)
Alkarrabah	80%	10%	10%	0%
An Nakhla	0%	0%	0%	100%
Bani Jamaea	0%	0%	100%	0%
Bani Mahdee	0%	0%	0%	100%
Bani Margham	56%	0%	44%	0%
Bani Mubarez	81%	19%	0%	0%
Bani Muslim	26%	42%	32%	0%
Bani Omar Al Ali	0%	25%	50%	25%
Bani Omar As Safil	0%	0%	100%	0%
Bani Saba	67%	0%	22%	11%
Bani Saif Al Ali	13%	25%	63%	0%
Bani Saif As Safil	0%	11%	89%	0%
Bani Sawi	0%	5%	16%	79%
Hamir	0%	8%	8%	85%
Mudhagain	50%	0%	50%	0%

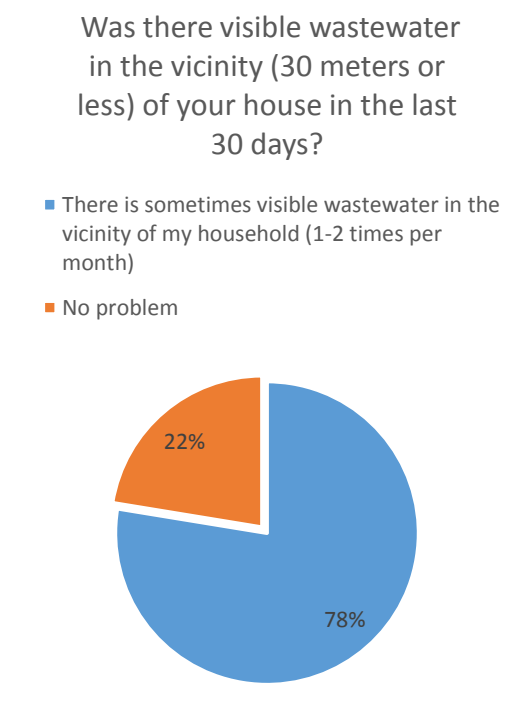
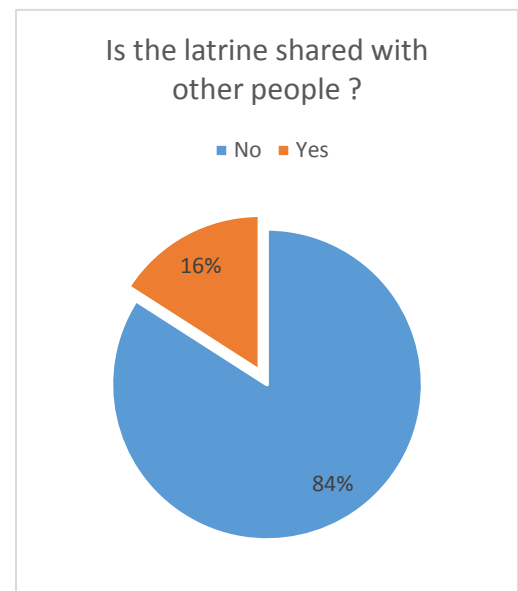
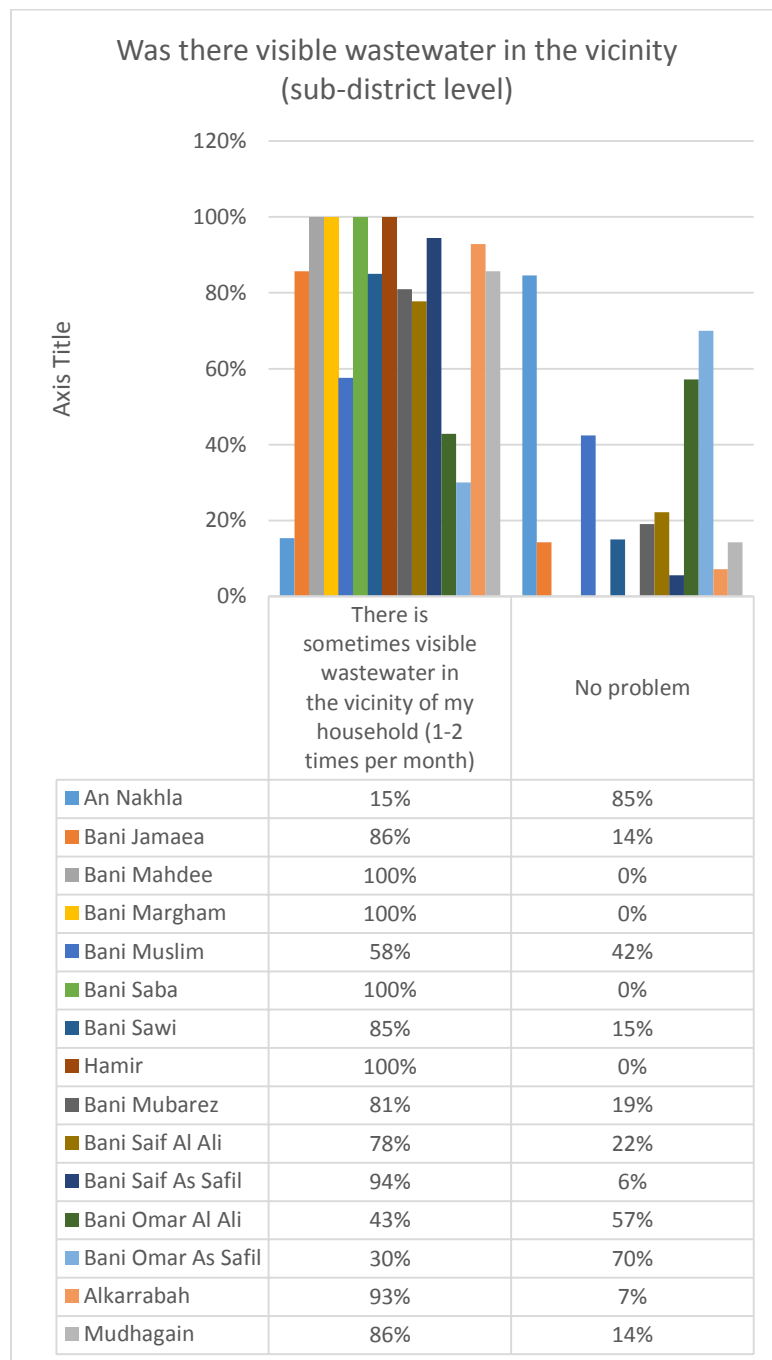
Do your household members have access to a functioning latrine?



What type of latrine do your household members have access to?



Waste water and sanitation is a main issue in Al Qafr district too. In a district level, 78% of households have issues with waste water around their houses and environment. In a sub-district level, it is very obvious that most of the sub-district are affected by the sanitation in in the open problem. In a sub-district level, there is a significant issue with the waste water and sanitation in the selected three sub-districts as shown in the figures below:



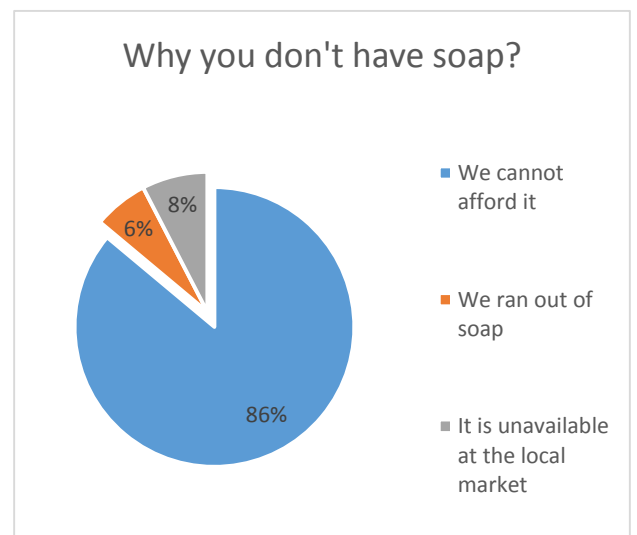
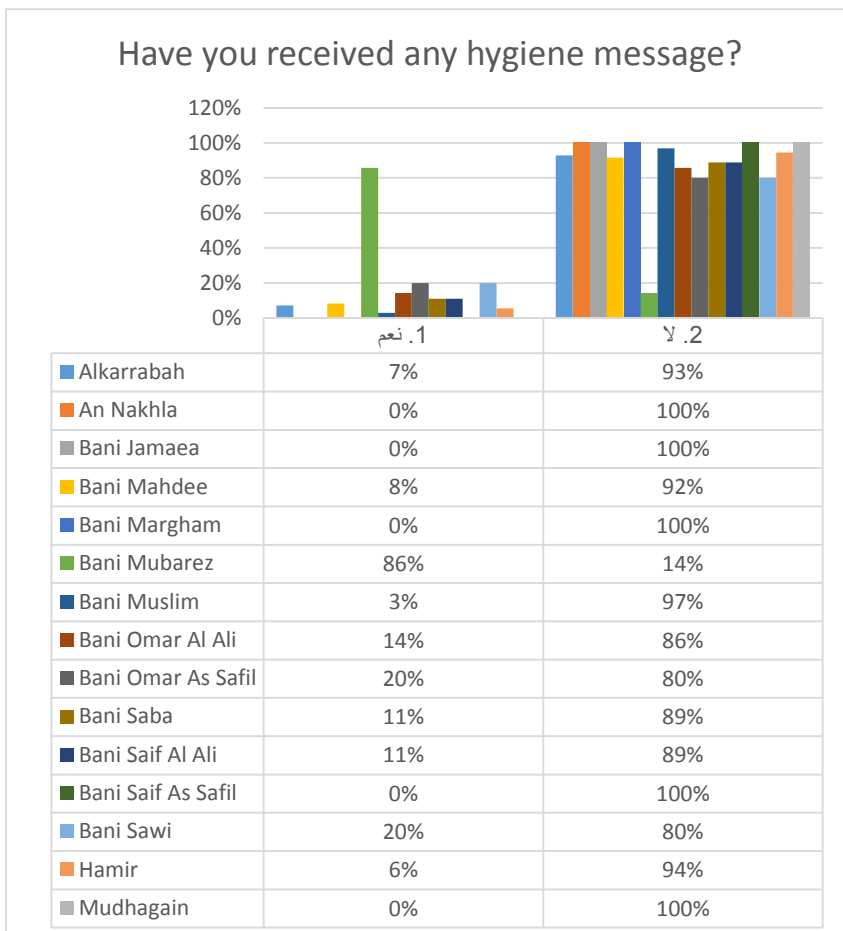
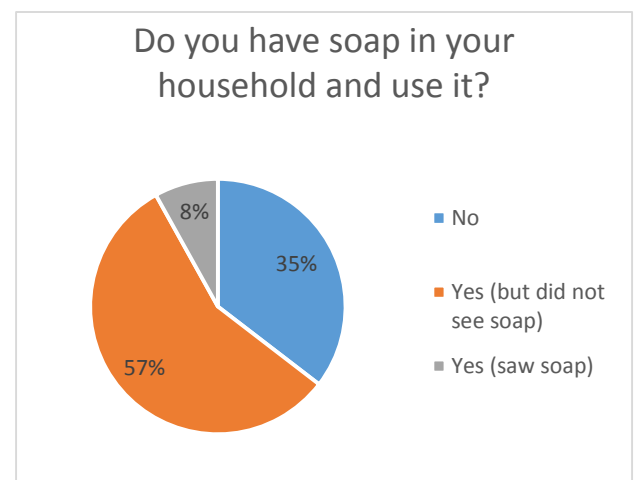
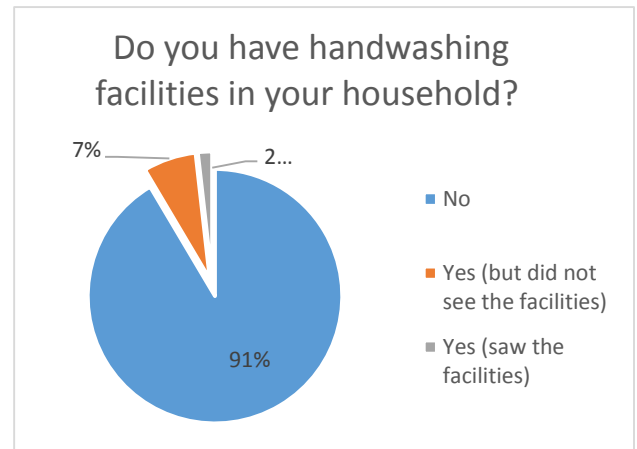
### 9.2.2.4 Hygiene

The hygiene practices in the district of Al Qafr are weak and in acute need for response. 91% of HHs don't have hand washing facilities. 35% of HHs don't use soap and 57% said they have, but the interviewer did not see it at the time of the interview. 86% of HHs can't afford the soap and this is an indication for the very poor financial condition of HHs in the sub-districts of Al Qafr in general.

191 out of the 223 sample (86%) reported that they have not received any hygiene message ever.

The three selected sub-districts are in need for hygiene awareness sessions. Bani Mahdi sub-district have not received any hygiene messages as indicated by the obtained data, as well as from the KIIs interviews.

The figure below show the percentage of people who have received hygiene messages and who did not in each sub-district.





### 9.2.3 FGDs

The field enumerators conducted 18 FGDs in the fifteen sub-districts of Al Qafr. The FGDs data was analyzed and they have confirmed the finding of the individual HHs interviews findings. The following are the highlights and important notes concluded from people's discussions:

- The main water source for most of the HHs are unprotected wells and they are in a very bad condition.
- Most of people complain about the bad smell, color and taste of water they obtain from most of the water sources including unprotected wells.
- It was stated by the community of Al Qafr in general that access to water is changing since sometimes it is easy to reach water sources and sometimes it is not.
- People use different coping strategies to adopt with lack of drinking water. A significant percentage of people drink water that is usually used for cleaning or other purposes than drinking and reduce drinking water consumption.
- The community stated that more than three quarters of the community don't have access to latrines. Most areas of the community have constant sewage problems and the waste water is always visible in the surroundings of houses and public areas.

### 9.2.4 KIIs

RDP WASH engineers conducted two Key Informants Interviews in the district of Al Qafr with the District Director and one of the Shaikhs of the district. Below is a summary of the conducted KIIs and their highlights:

- Water sources are very limited and hard to reach by people and they use animals to transport water and walk for long distances to fetch water and return. Women and children are responsible for bringing water.
- Sanitation and waste water is a significant problem which needs intervention by NGOs.
- Most of HHs cannot afford buying the basic hygiene items of soap and detergents.
- It is recommended to intervene by fixing HHs sanitation which is spreading on the public streets and surroundings.

### 9.2.5 Recommendations

After deep analysis from the different data sources and analysis and demonstration above, we have concluded the following recommendations for the kind of activities and services to be provided in the intended intervention:

- Conduct a feasibility study to evaluate the appropriateness of the intervention of rehabilitation of water schemes and choose the suitable place to conduct it.
- Rehabilitation of one water schemes in one of the three selected sub-districts of Madhagain, Bani Saif Al Ali, or Bani Mahdi as a first stage (pilot) after the results of the feasibility study and extend the intervention to other sub-districts as the priority indicates in the analysis
- Provision of communal water tanks to be linked with the water scheme which will be rehabilitated be in closer locations to beneficiaries
- Provision of water filters for HHs for treatment of drinking water
- Implement a water quality surveillance and mapping of water sources
- Rehabilitation and dislodging of family latrines and construction of latrines for families with no latrines
- Distribution of basic and consumable hygiene kits for HHs
- Conduct cleaning campaigns in the selected sub-districts
- Conduct hygiene KAP study in the selected sub-districts as a pilot study to measure the impact of the intended interventions to the knowledge, attitude, and practices of beneficiaries

10.Photos



Photo (1) Contaminated water sources in Khayran Al Muharraq (Gharbi Al Khamesayn)



Photo (2) Pit latrines in the open in Khayran Al Muharraq ( Gharbi Al Khamesayn)



Photo (3) Pit latrines in the open in Khayran Al Muharraq ( Gharbi Al Khamesayn)



Photo (4) Pit latrines in the open in Khayran Al Muharraq ( Sharqi Al Khamesayn)



Photo (5) Children collecting water from clearly contaminated water source and drinking from it directly without any purification



Photo (6) Gharbi Al Khamesayn people go to obtain water



Photo (7) Children collecting un-clean water from contaminated sources



Photo (8) Women collecting water from un-protected well



Photo (9) Samples of wells in Khayran Al Muharraq



Photo (10) Sources of contamination and need for sanitation services and cleaning campaigns in Al Qafr district



Photo (11) Bad sanitation situation in Al Qafr district





Photo (12) Women and children collecting water from un-clean sources in Al Qafr district



Photo (13) Women collecting water from water sources where they wait for too long and come from far areas in Al Qafr district



Photo (14) Samples of un-protected wells in Al Qafr district

## 11. References

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