



WATER SUPPLY NEED ASSESSMENT

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Assessment axes

- Water boreholes
- Boreholes pumps
- Water networks
- Stakeholders feedback

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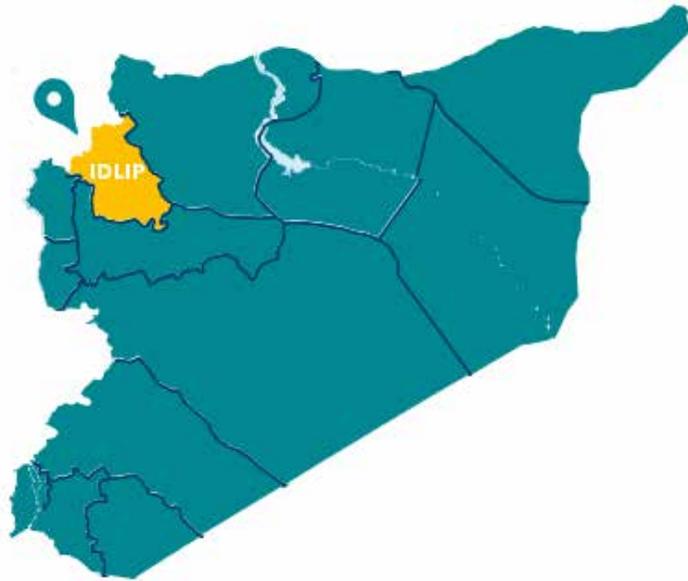


The MEAL team during a mission to conduct questionnaires to assess the needs in the Idlib Gov.



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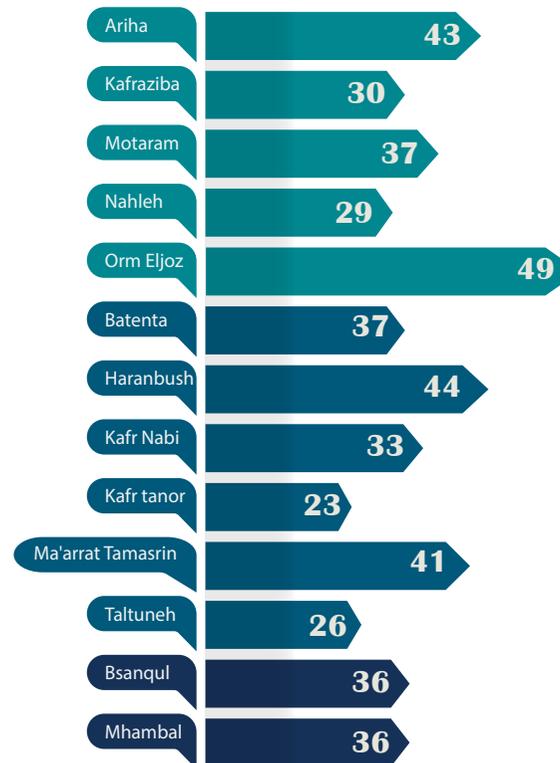
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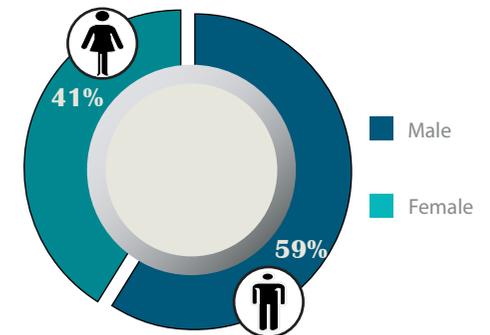
EXECUTIVE SUMMARY

Nasem Khair organization conducted a water supply need assessment in the thirteen locations in the Idlib Governorate. (Ariha, Kafraziba, Motaram, Nahleh, Orm Eljuz, Batenta, Haranbush, Kafr Nabi, Kafr tanor, Ma'arrat Tamasrin, Taltuneh, Bsanqul, Mhambal). The objective examine the status of the water support facilities and capture the water supply needs for the population in these areas. Nasem Khair organization carried out 40 technical surveys with technical key-informant as interviews, 465 Households questionnaires. 30% of questionnaires were conducted with internally displaced persons, and 41% of questionnaires was conducted with female participants. The data collection starter on 10.6.2021 and continued until 10.7.2021.

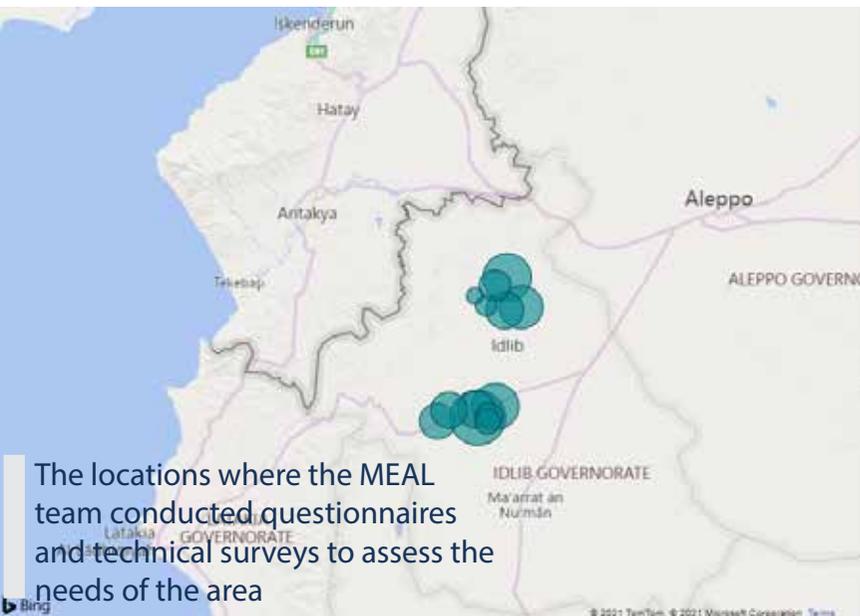
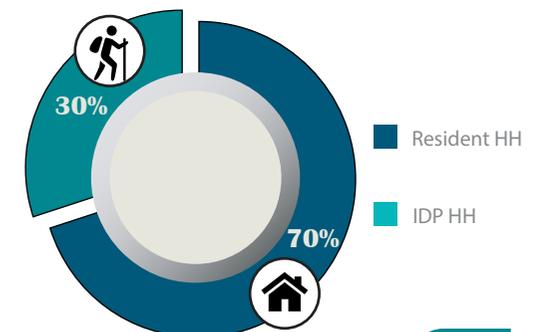
Number of questionnaires per location



Participant gender



Residency status



The locations where the MEAL team conducted questionnaires and technical surveys to assess the needs of the area

INTRODUCTION

Nasaem Khair Organization, conducted a water supply need assessment of the Idlib Governorate in June 2021 through on-the-ground data collection of local populations. The rationale behind the assessment came from our prior knowledge of the low level of services in water supply sectors, and internally displaced persons ('IDPs') constituting a large proportion of the population. Furthermore, the team aimed to obtain information about the general demographic and geographic nature of the region and the challenges facing the delivery of water supply sectors.

OBJECTIVES

- The findings intend to provide timely updates on key sectoral needs (water supply sector) and priorities in order to inform humanitarian programs in the region, especially the ones that focus on IDPs.
- Inform Nasaem Khair Response Plan in Idlib Governorate.
- Contribute to a more targeted and evidence-based humanitarian response.



A picture of one of the water tanks in the Idlib Gov.

Pictures during interviews with citizens.



Pictures during the technical survey.

METHODOLOGY

The needs assessment recruited a scientific methodology using a multi-approach where the qualitative and quantitative the elements were done with the technical one.

- The first phase – the qualitative and quantitative elements:

The first stage included key informant interviews (KIIs).

The MEAL team prepared interview guides which were uploaded onto the Kobo Toolbox Platform to be downloaded in the Kobo Collect App later in the field by enumerators.

The guides aimed to collect narrative qualitative and quantitative data about the region's needs. Open-ended questions were used to obtain participants' honest opinions and do not restrict to any pre-written answers as well as close-ended questions were used to get quantitative results.

The individual interviews template [here](#), and the quantitative questionnaire [here](#).

To carry out the KIIs, a team of volunteers were recruited and trained in the Idlib Gov.

The first training session was held in the field (Kafr Jales) by the MEAL Officer, followed by online training provided by the MEAL Coordinator. The results were documented onto the Kobo platform between 6.6.2021 and 30.6.2021.

Participant responses were collected from the Kobo platform, and then analyzed using thematic analysis. In total, 40 technical surveys and 465 questionnaires were conducted in Idlib and its subdistricts.

Given the IDP population, %30 of questionnaires were conducted on IDPs.

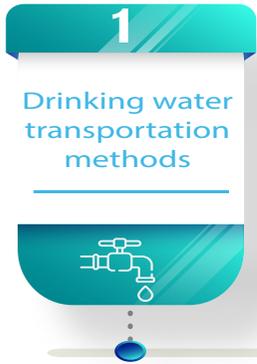
Additionally, and to ensure a gender-balanced representative sample, %41 of questionnaires were conducted on female participants.

The questionnaires were conducted face to face using the Kobo toolbox, and then transferred into Excel sheets for analysis.

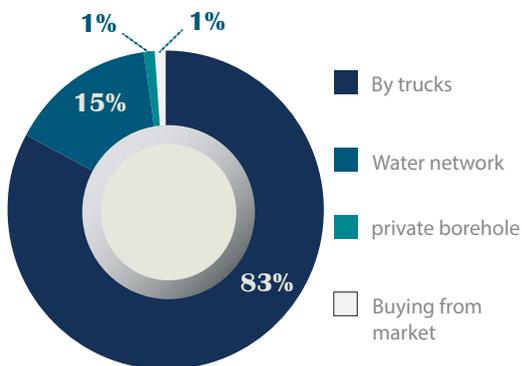
In total 465 questionnaires were carried out in 13 locations in the Idlib Gov as follows:

Ariha, Kafraziba, Motaram, Nahleh, Orm Eljoz, Batenta, Haranbush, Kafr Nabi, Kafr tanor, Ma'arrat Tamasrin, Taltuneh, Bsanqul, Mhambal.

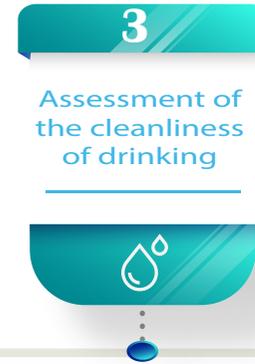
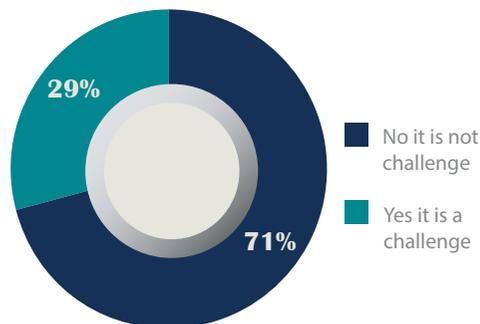
KEY FINDINGS



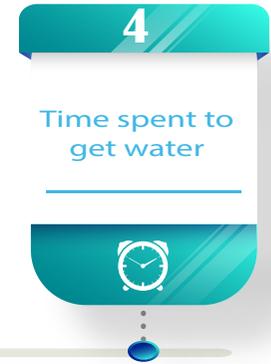
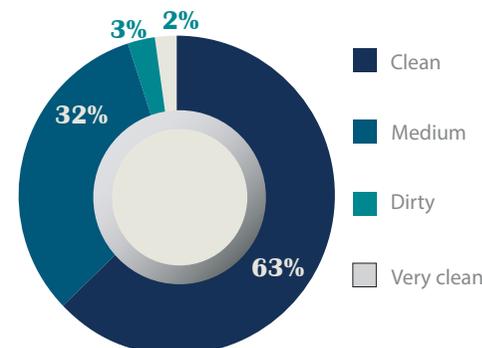
Most participants (85%) chose trucks as a transportation method to get the drinking water from boreholes, and the main reason, as will appear in the technical study later, is the need for pumps operational costs in addition to some other technical reasons. The questionnaire also showed that 15% of participants can use a connected water network to the house, and 1% get water through a private borehole and the same result by purchasing water from the market.



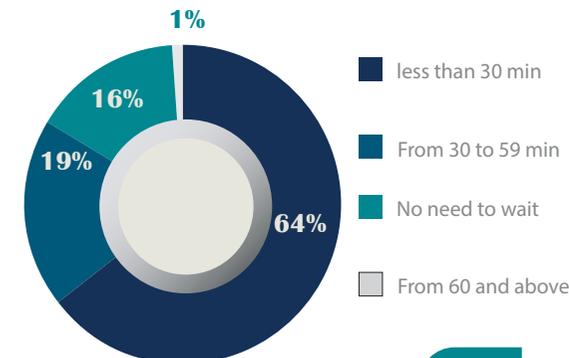
29% of the female participants who represent 41% of the study population mentioned that there is a challenge in getting drinking water, the main reason is the lack of connected water networks to their homes, and therefore they have to transfer it through trucks. The challenges can be as difficulty in communicating with truck drivers or emptying water in household tanks.



A small percentage (3%) of the participants mentioned that the water is not clean, because the drinking water transportation in many areas by trucks, this is not a professional way to maintain the cleanliness of the water, in addition to the difficulty of controlling the chlorination of water, as well 63% of the participants mentioned that the water is clean, 32% answered by Medium Category.



Most of the participant's responses (64%) mentioned that water transporting to their homes takes half an hour, even if the method of transportation is by a truck as we will explain in the detailed findings, and this does not mean a long waiting time due to a large number of water trucks, as well 19% of the answers were under Half to less Than One-Hour Category, 16% mentioned that they don't need to spend a waiting time to get a drinking water, 1% from one hour and above.

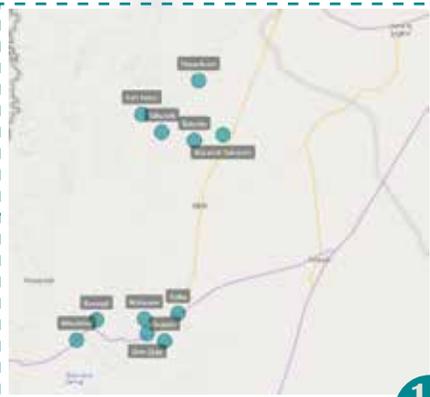


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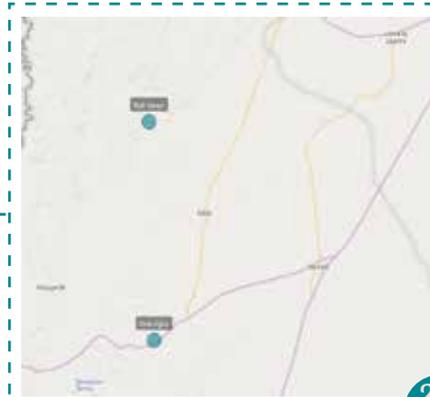
Technical evaluation of boreholes, pumps and water



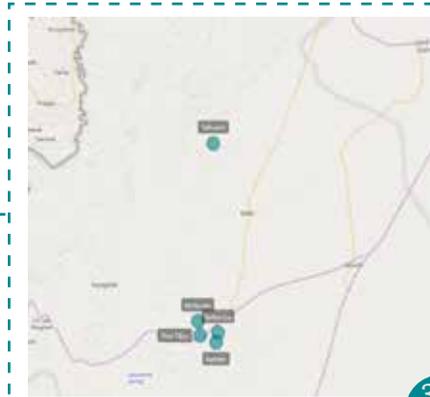
The results showed that Most of the residents in the studied areas depend on water trucking as a way to get safe and drinkable water, with only one exception in Kafr Nabi (Picture 1). In terms of the water networks in the targeted areas, the results showed that the networks in Kafr Tannour and orm al-Jawz need for expansion (Picture 2), as well as, the networks in Talanta, Kafr Ziba, Mutaram, Nahleh and orm al-Jawz need to be restored (Picture 3). The water tanks are in good a condition in all areas, except for the water tank in Nahleha, which needs to be rehabilitated (Picture 4). The water pumps in Maaret Mesreen , Ariha, Harbanush, Batinta, orm Al Jouz, Basnkoul, Mohmbel and Kafr Tannour have stopped working due to the need for an operating expense (Picture 5). All pumps are in a good shape and funcnaitonal except for one pump in Maaret Mesreen that needs to be repaired at a cost of \$2000 (Picture 6). Most of the water boreholes in these areas are public boreholes, except of two private boreholes in Ariha, and two in Talneta (Picture 7), and one borehole in Kafr Tanour. There are no water boreholes in both Nahleh and Kafr Ziba, whether public or private (Picture 8).



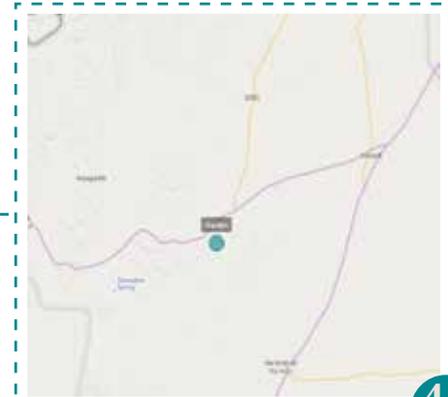
Locations where citizens depend on trucks to transport water.



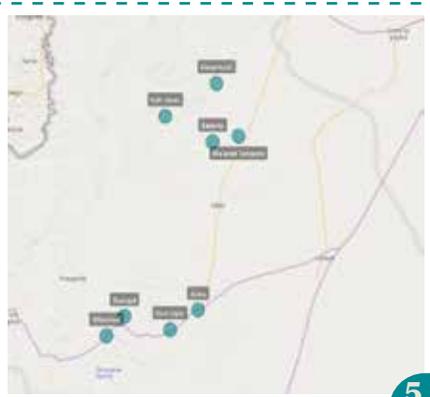
Locations where the water networks need for expansion.



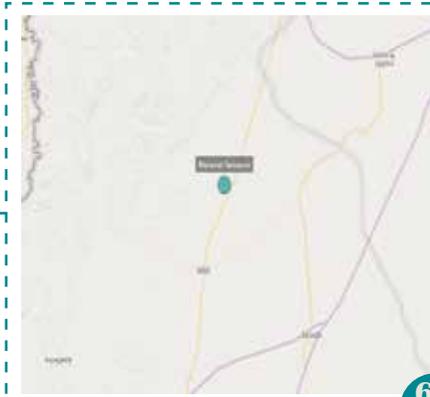
Locations where the networks need to be restored.



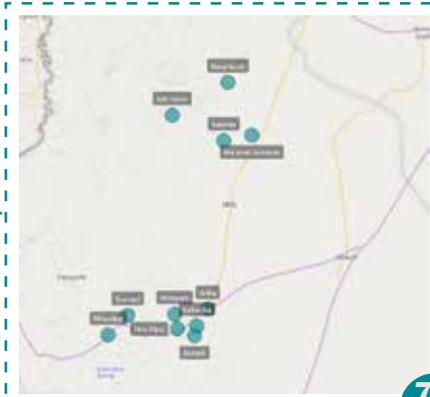
Location where the water tanks needs to be rehabilitated.



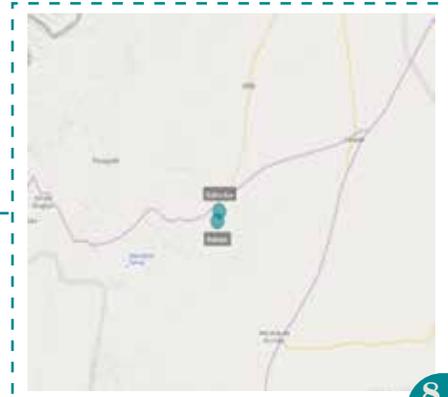
Location where the water pumps have stopped working due to the need for an operating expense.



Location where the pump needs to be repaired.



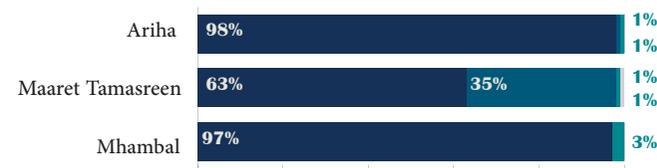
Locations where the water boreholes are public boreholes.



Locations where there are no water boreholes whether public or private.

DETAILED RESULTS

- By trucks
- Water grid
- private borehole
- Buying from market



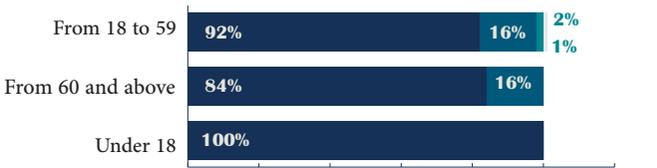
According to districts, 98% of the participants who are from Ariha District mentioned that they get the drinking water by trucks, and 63% of the participants in Maaret Tamasreen use the same metode, as well as 97% in Mhambal.



According to the displacement situation, most of the displaced (87%) use trucks to transport water, and 81% percentage of residents also use the same method.



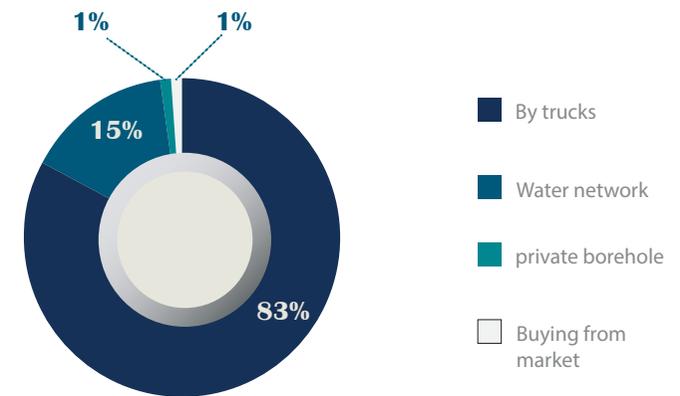
According to the gender of the informant, approximately the same ratios between the tow genders, 83% of the females use trucks, and 82% of the males also use the same method.



According to age groups, 92% of the participants who are from 18 to 59 years old mentioned that they get the drinking water by trucks, and 84% of the participants who are from 60 and above use the same method. in addition all the Under 18 years group use the same metod.

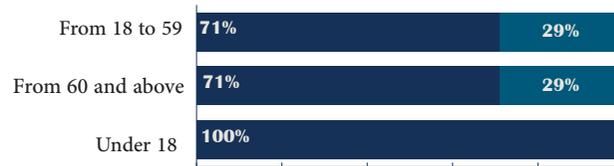
Drinking water transportation methods

The MEAL Enumerators asked people in the mentioned areas in the report introduction about the ways that people get drinking water from boreholes, whether it is through the water network, water trucks, private boreholes, or purchase from the market. The highest percentage of participates answers were via trucks (83% as the chart shown below), this due to multi reasons, such as the pumps stopped working as a result of the lack of operational cost in Ariha and Mhambal as an example, furthermore some of water networks need repairing, and their size is less than the geographical expansion of the studied areas, and some ereas need to repair the water tanks. The questionnaire also showed that 15% of participants can use a connected water network to the house, and 1% get water through a private boreholes and the same result by purchasing water from the market.. we will discus more detailed technical reasons in the technical study.

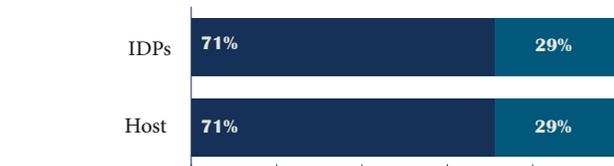


DETAILED RESULTS

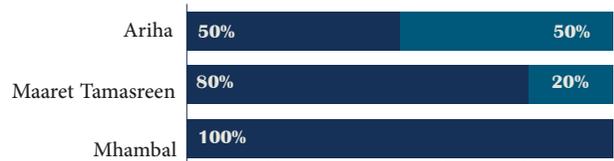
■ No it is not challenge
■ Yes it is a challenge



According to age groups, 71% of the female participants who are from 18 to 59 years old mentioned that there are no challenges to get the drinking water, while 29% of them were suffering from challenges in getting the water, and the same result for the female participants who are from 60 and above. In addition, no challenges were reported in the Under 18 years group.



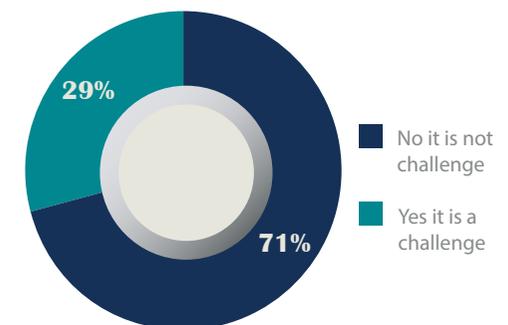
According to residence state, 71% of female IDPs participants mentioned that there are no challenges to get the drinking water, while 29% of them were suffering from challenges in getting the water, and the same result for the female resident participants.



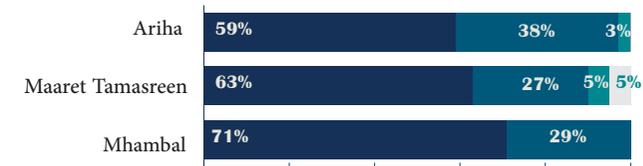
50% of the female respondents from the Ariha district reported that there are challenges in getting water, especially as we will see in the technical study that all pumps are not working, and they use trucks to transport water. As well as 20% in Maaret Tamasreen suffering from the challenges too, while in Mhambal no challenges were reported due to people there used to transport water by trucks.

Challenges women face in bringing drinking water

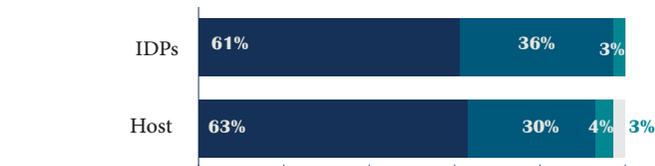
29% of the female participants who represent 41% of the study population mentioned that there is a challenge in getting drinking water, the main reason is the lack of connected water networks to their homes, and therefore they have to transfer it through trucks. The challenges can be as difficulty in communicating with truck drivers or emptying water in household tanks. These detailed results are only from the women participants according to their age groups, displacement state and geographic district. The charts show that there are high challenges in Ariha District due to the pumps there are not working due to shortage of operation cost and the people of this area are not accustomed to transporting water by tankers, so it constituted a great challenge for women, while the situation in Mhambal was better due to people there got used to getting the water by trucks for a long time.



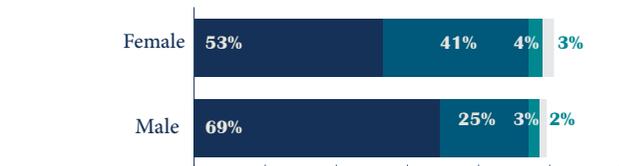
DETAILED RESULTS



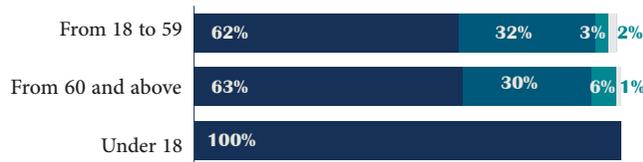
We asked the citizens about the cleanliness of the water, 59% of the citizens in Ariha mentioned that the water is clean, 68% of the sample that was asked in Maarrat Tamasreen answered by clean or very clean, as well as 71% of citizens opinions in Mhambal selected the Clean option, but 3% in Ariha and 5% in Maarrat Tamasreen said that the water is unclean.



As for the displacement state, 61% of the IDPs mentioned that the water is clean, and 66% of the host answered by clean or very clean choices, while 3% of the IDPs and 4% of the host answered that the water is unclean.



56% of the females and 71% of the males said that the water was clean or very clean, while 4% of the females and 3% of the males answered that the water was unclean.

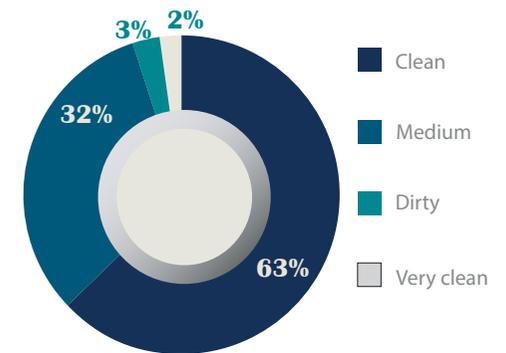


As for the age groups, 64% of the first age group (From 18 to 59), 64% of the From 60 and above age groups and 100% of the last age group (Under 18) mentioned that the water is clean or very clean, while 3% of the From 18 to 59 Group and 6% of the From 60 and above Group answered that the water is unclean.

Assessment of the cleanliness of drinking water

As a general result about the cleanliness of the drinking water, the categories of: water is clean or acceptable were the largest proportion according to all the determinants, such as according to the geographical area or the displacement situation, but this does not mean that there is no unclean water due to the dependence on trucks to transport drinking water, and this weakens the ability to monitor the cleanliness of the water, and may expose it to some accidents that cause poor water cleanliness.

A small percentage (3%) of the participants mentioned that the water is not clean, because the drinking water transportation in many areas by trucks, this is not a professional way to maintain the cleanliness of the water, in addition to the difficulty of controlling the chlorination of water, as well 63% of the participants mentioned that the water is clean, 32% answered by Medium Category.



DETAILED RESULTS

- less than 30 min
- From 30 to 59 min
- No need to wait
- From 60 and above

The field team enumerators asked the citizens about the time they spend to obtain drinking water, and according to the sub-district, 55% of citizens in Ariha, 60% in Maaret Tamasreen and 97% in Mhambal answered that they spend less than half hour to obtain water, while 42 in Ariha and 4% in Maaret Tamasreen and 1% in Mhambal chose the option of half hour to one hour, 1% in Ariha said they spend more than one hour and 1% in Ariha mentioned that they don't have to wait to get the water.

Regarding the displacement state, 68% of the IDPs and 62% of the hosts mentioned that they spend less than half hour to get water, 19% of the IDPs and 19% of the hosts need from half hour to one hour to get water, and only 2% of the hosts need more than one hour to get the water, while 13% of the IDPs and 19% of the hosts do not need to spend time to get water.

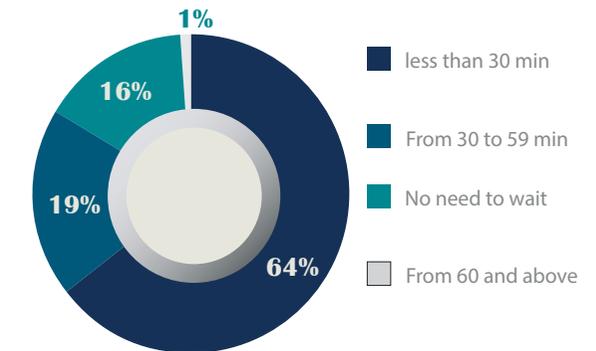
According to the gender of the respondents, 66% of the females and 62% of the males mentioned that they spend less than half hour to get drinking water, and 16% of the females and 21% of the males need from half hour to one hour to get water, and only 1% of the females and the same percentage of the males need more than one hour, while 16% females and the same percentage of the males do not need to spend time to get water.

According to the age groups, 64% of the from 18 to 59 age group, 63% of the from 60 and above age group and 100% of the under 18 age group mentioned that they spend less than half hour to get water, and 19% of the from 18 to 59 age group and 21% of the from 60 and above age group said they need half hour to one hour to get water, and 1% of the from 18 to 59 category need from one or more than one hour, while 19% of the from 18 to 59 category and 21% of the from 60 and above category do not need time to get drinking water.

Time spent to get water

As a general result, regarding the time spent to get water, according to several criteria such as geographic location, displacement status, gender of the respondents and according to age groups, the largest percentage of the responses mentioned that the citizens need less than half an hour to get drinking water, while it was in the second class the category of half hour to one hour to get water, the next is more than one hour, the last category is no need to spend time to get water.

Most of the participant's responses (64%) mentioned that water transporting to their homes takes half hour, even if the method of transportation is by a truck as we will explain in the detailed findings, and this does not mean a long waiting time due to a large number of water trucks, as well 19% of the answers were under Half to less Than One-Hour Category, 16% mentioned that they don't need to spend a time to get a drinking water, 1% from one hour and above.



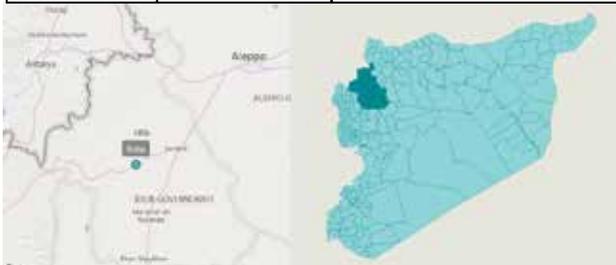
| Sub_District | Location | Water network state | Tanks state | Water transport by trucks (Presentage) | Population | | | | |
|----------------|-------------------|----------------------------|----------------------------|--|--------------------|-------------------|----------------------|-----------------------------------|-----------------------------------|
| Maaret Tamsrin | Ma'arrat Tamasrin | Available, work and enough | Available, work and enough | 0.73 | 110000 | | | | |
| Sub_District | Location | Station No | Water borehole state | Depth m | Exuberance m3/h | Diameter m | Static height m | | |
| Maaret Tamsrin | Ma'arrat Tamasrin | 1 | active | 240 | 53 | 0.4 | 180 | | |
| Maaret Tamsrin | Ma'arrat Tamasrin | 2 | active | 240 | 50 | 0.4 | 180 | | |
| Maaret Tamsrin | Ma'arrat Tamasrin | 3 | active | 240 | 70 | 0.4 | 180 | | |
| Maaret Tamsrin | Ma'arrat Tamasrin | 4 | active | 240 | 48 | 0.4 | 180 | | |
| Maaret Tamsrin | Ma'arrat Tamasrin | 5 | active | 240 | 50 | 0.4 | 180 | | |
| Maaret Tamsrin | Ma'arrat Tamasrin | 6 | active | 240 | 23 | 0.4 | 180 | | |
| Maaret Tamsrin | Ma'arrat Tamasrin | 7 | active | 240 | 45 | 0.4 | 180 | | |
| Maaret Tamsrin | Ma'arrat Tamasrin | 8 | active | 240 | 65 | 0.4 | 180 | | |
| Maaret Tamsrin | Ma'arrat Tamasrin | 9 | active | 400 | 55 | 0.4 | 200 | | |
| Maaret Tamsrin | Ma'arrat Tamasrin | 10 | active | 400 | 52 | 0.4 | 200 | | |
| Maaret Tamsrin | Ma'arrat Tamasrin | 11 | active | 400 | 48 | 0.4 | 200 | | |
| Sub_District | Location | Station No | Pump availability | Capacity | Pump working state | Downtime by month | Reason of stopping | Estimated cost of repair by Dolar | Operating cost per month by Dolar |
| Maaret Tamsrin | Ma'arrat Tamasrin | 1 | Available | 75 | Working | | | | 10500 |
| Maaret Tamsrin | Ma'arrat Tamasrin | 2 | Available | 70 | Working | | | | 10200 |
| Maaret Tamsrin | Ma'arrat Tamasrin | 3 | Available | 65 | Working | | | | 9000 |
| Maaret Tamsrin | Ma'arrat Tamasrin | 4 | Available | 70 | Working | | | | 10200 |
| Maaret Tamsrin | Ma'arrat Tamasrin | 5 | Available | 65 | Working | | | | 9000 |
| Maaret Tamsrin | Ma'arrat Tamasrin | 6 | Available | 60 | Working | | | | 8700 |
| Maaret Tamsrin | Ma'arrat Tamasrin | 7 | Available | 60 | Does not work | 48 | Poor boreholes yield | 2000 | 8700 |
| Maaret Tamsrin | Ma'arrat Tamasrin | 8 | Available | 65 | Working | | | | 9000 |
| Maaret Tamsrin | Ma'arrat Tamasrin | 9 | Available | 75 | Working | | | | 10500 |
| Maaret Tamsrin | Ma'arrat Tamasrin | 10 | Available | 65 | Working | | | | 9000 |
| Maaret Tamsrin | Ma'arrat Tamasrin | 11 | Available | 60 | Working | | | | 8700 |



A city with a population of 110,000 people. It has 11 water boreholes and therefore 11 water pumps, only one pump has been out of work for 4 years and needs a \$2000 repair. The rest of the pumps are working, and pumping is done every 10 days only. 73% of the population obtains water by trucking; therefore, the working days of the pumps must be increased, and therefore we need an operating cost to operate the pumps. As for the status of the tanks and the water network were good.



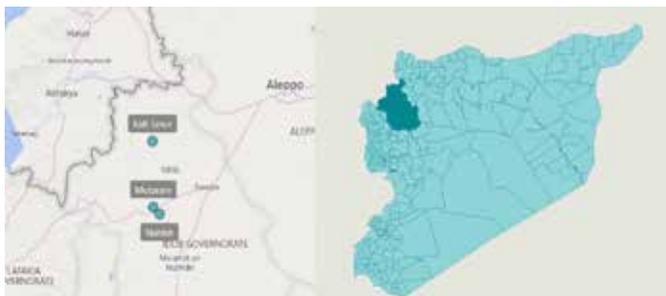
| Sub_District | Location | Water network state | Tanks state | Water transport by trucks (Presentage) | Population | | | | |
|--------------|----------|----------------------------|----------------------------|--|--------------------|-------------------|--------------------|-----------------------------------|-----------------------------------|
| Ariha | Ariha | Available, work and enough | Available, work and enough | 0.98 | 38000 | | | | |
| Sub_District | Location | Station No | Water borehole state | Depth m | Exuberance m3/h | Diameter m | Static height m | | |
| Ariha | Ariha | 1 | active | 600 | 27 | 0.33 | 470 | | |
| Ariha | Ariha | 2 | active | 560 | 43 | 0.31 | 470 | | |
| Ariha | Ariha | 3 | active | 560 | 35 | 0.31 | 470 | | |
| Ariha | Ariha | 4 | active | 500 | 33 | 0.28 | 377 | | |
| Ariha | Ariha | private well-1 | active | 538 | 37 | 0.36 | 410 | | |
| Ariha | Ariha | private well-2 | active | 410 | 35 | 0.33 | 370 | | |
| Sub_District | Location | Station name | Pump availability | Capacity | Pump working state | Downtime by month | Reason of stopping | Estimated cost of repair by Dolar | Operating cost per month by Dolar |
| Ariha | Ariha | 1 | Available | 125 | Working | | | | 10500 |
| Ariha | Ariha | 2 | Available | 135 | Working | | | | 15000 |
| Ariha | Ariha | 3 | Available | 125 | Working | | | | 15000 |
| Ariha | Ariha | 4 | Not available | | | | | | |
| Ariha | Ariha | special pump-1 | Available | 120 | Working | | | | 5000 |
| Ariha | Ariha | special pump-2 | Available | 110 | Does not work | 3 | Needs fuel | | 9000 |



A city with a population of 38000 people, it has 6 water boreholes, 4 public boreholes and 2 private boreholes there are 5 water pumps, 3 public, all working, and 2 private. 98% of the population gets water by trucking, there is need to operating cost to operate the pumps because the stations stop pumping water because they need fuel. The water network and tanks are in good condition.



| Sub_District | Location | Water network state | Tanks state | Water transport by trucks (Presentage) | Population | | | | |
|----------------|------------|--------------------------------|---------------------------------------|--|--------------------|-------------------|--------------------|-----------------------------------|-----------------------------------|
| Maaret Tamsrin | Kafr tanor | Available, work but not enough | Available, work and enough | 1 | 2500 | | | | |
| Ariha | Motaram | Available but needs to repair | Available, work and enough | 1 | 6500 | | | | |
| Ariha | Nahleh | Available but needs to repair | Available, enough but needs to repair | 1 | 1500 | | | | |
| Sub_District | Location | Station No | Water borehole state | Depth m | Exuberance m3/h | Diameter m | Static height m | | |
| Maaret Tamsrin | Kafr tanor | 1 | active | 300 | 70 | 1 | 300 | | |
| Maaret Tamsrin | Kafr tanor | private borehole | active | 280 | 40 | 0.75 | 250 | | |
| Ariha | Nahleh | Not available | Not available | | | | | | |
| Ariha | Motaram | 1 | active | 475 | 35 | 0.35 | 390 | | |
| Ariha | Nahleh | There is not | | | | | | | |
| Sub_District | Location | Station name | Pump availability | Capacity | Pump working state | Downtime by month | Reason of stopping | Estimated cost of repair by Dolar | Operating cost per month by Dolar |
| Maaret Tamsrin | Kafr tanor | 1 | Available | 70 | Does not work | 5 | Needs fuel | | 5720 |
| Maaret Tamsrin | Kafr tanor | special pump-1 | Available | 30 | Working | | | | 4500 |
| Ariha | Nahleh | 1 | Not available | | | | | | |
| Ariha | Motaram | 1 | Available | 110 | Working | | | | 7800 |



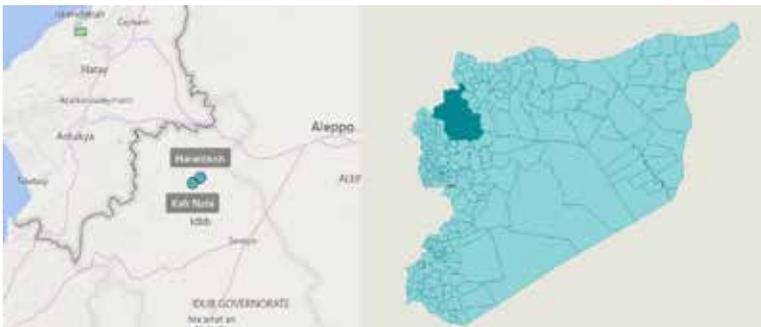
Kafr Tanor is a village with a population of 2,500 people, belonging to Marat Misrin, it has public water borehole with a pump that has stopped working due to the need for fuel. It also has a private boreholes with a well-functioning pump. 100% of the population has access to water by trucking, the water network is not enough, we need to expand the network. We need an operating cost for the pump to work.

Motaram is a village with a population of 6500 people, it belongs to the city of Ariha. It has public water borehole with a pump that has stopped working due to the need for fuel, 100% of the population has access to water by trucking. The water network needs repair. it needs an operating cost for the pump to work.

Nahleh is a village with a population of 1500 people, belonging to the city of Ariha. There are no water boreholes. 100% of the population has access to water by trucking, the water network and tank need repair, there is a need to dig a water borehole.



| Sub_District | Location | Water network state | Tanks state | Water transport by trucks (Presentage) | Population | | | | |
|----------------|-----------|----------------------------|----------------------------|--|--------------------|-------------------|--------------------|-----------------------------------|-----------------------------------|
| Maaret Tamsrin | Haranbush | Available, work and enough | Available, work and enough | 0.91 | 30000 | | | | |
| Maaret Tamsrin | Kafr Nabi | Available, work and enough | Available, work and enough | 0.03 | 5500 | | | | |
| Sub_District | Location | Station No | Water borehole state | Depth m | Exuberance m3/h | Diameter m | Static height m | | |
| Maaret Tamsrin | Haranbush | 1 | active | 500 | 60 | 0.35 | 125 | | |
| Maaret Tamsrin | Haranbush | 2 | active | 350 | 25 | 0.35 | 125 | | |
| Maaret Tamsrin | Haranbush | 3 | active | 350 | 20 | 0.35 | 125 | | |
| Maaret Tamsrin | Kafr Nabi | 1 | active | 400 | 6 | 0.35 | 260 | | |
| Sub_District | Location | Station name | Pump availability | Capacity | Pump working state | Downtime by month | Reason of stopping | Estimated cost of repair by Dolar | Operating cost per month by Dolar |
| Maaret Tamsrin | Haranbush | 1 | Available | 125 | Working | | | | 9200 |
| Maaret Tamsrin | Haranbush | 2 | Available | 50 | Working | | | | |
| Maaret Tamsrin | Haranbush | 3 | Available | 40 | Working | | | | |
| Maaret Tamsrin | Kafr Nabi | 1 | Available | 60 | | | | | 7000 |

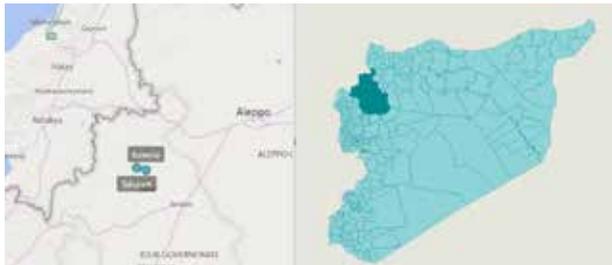


Harbanush is a village with a population of 30,000 that belongs to Marat Misrin, it has 3 public boreholes and 3 pumps, all working. 91% of the population gets water by trucking, there is a need to operating cost to operate the pumps because the stations stop pumping water because they need fuel, the water network and tanks are in good condition.

Kafr Nabi is a village with a population of 5500 people, it belongs to Marat Misrin, it has a boreholes with a pump that works well, 3% of the population obtains water by trucking, the condition of the tanks and the water network is good.



| Sub_District | Location | Water network state | Tanks state | Water transport by trucks (Presentage) | Population | | | | |
|----------------|----------|-------------------------------|----------------------------|--|--------------------|-------------------|--------------------|-----------------------------------|-----------------------------------|
| Maaret Tamsrin | Batenta | Available, work and enough | Available, work and enough | 0.27 | 4500 | | | | |
| Maaret Tamsrin | Taltuneh | Available but needs to repair | Available | 0.92 | 800 | | | | |
| Sub_District | Location | Station No | Water borehole state | Depth m | Exuberance m3/h | Diameter m | Static height m | | |
| Maaret Tamsrin | Batenta | 1 | active | 400 | 85 | 0.7 | 300 | | |
| Maaret Tamsrin | Taltuneh | private borehole-1 | active | 200 | 10 | 1 | 130 | | |
| Maaret Tamsrin | Taltuneh | private borehole-2 | active | 250 | 10 | 0.75 | 135 | | |
| Sub_District | Location | Station name | Pump availability | Capacity | Pump working state | Downtime by month | Reason of stopping | Estimated cost of repair by Dolar | Operating cost per month by Dolar |
| Maaret Tamsrin | Batenta | 1 | Available | 100 | Does not work | 5 | Needs fuel | | 16200 |
| Maaret Tamsrin | Taltuneh | special pump-1 | Available | 17 | Working | | | | Solar energy |
| Maaret Tamsrin | Taltuneh | special pump-2 | Available | 10 | Working | | | | Solar energy |

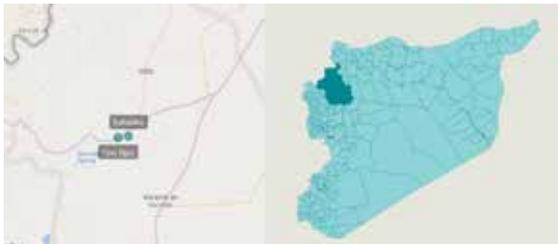


Batenta village has a population of 4,500 people, belonging to Marat Misrin, one water borehole with a stopped pump that causes the need for fuel. 27% of the population obtains water by trucking, as for the pump, it has stopped working because of the operational cost. We need an operating cost to restart it, the water network and tanks are in good condition.

Taltuneh is a village with a population of 800 people, belonging to Marat Misrin, there are no public water boreholes, and there are 2 private water boreholes with pumps that work well, 92% of the population obtains water through trucking, the water network needs repair, the available boreholes are private and not connected to the network.



| Sub_District | Location | Water network state | Tanks state | Water transport by trucks (Presentage) | Population | | | | |
|--------------|-----------|--------------------------------|----------------------------|--|--------------------|-------------------|--------------------|-----------------------------------|-----------------------------------|
| Ariha | Orm Eljoz | Available, work but not enough | Available, work and enough | 0.98 | 90000 | | | | |
| Ariha | Kafraziba | Available but needs to repair | Available but not enough | 0.97 | 3200 | | | | |
| Sub_District | Location | Station No | Water borehole state | Depth m | Exuberance m3/h | Diameter m | Static height m | | |
| Ariha | Orm Eljoz | 1 | active | 400 | 15 | 0.4 | 330 | | |
| Ariha | Orm Eljoz | 2 | active | 400 | 30 | 0.4 | 300 | | |
| Ariha | Orm Eljoz | private borehole | active | 400 | 20 | 0.3 | 300 | | |
| Ariha | Kafraziba | Not available | Not available | | | | | | |
| Sub_District | Location | Station name | Pump availability | Capacity | Pump working state | Downtime by month | Reason of stopping | Estimated cost of repair by Dolar | Operating cost per month by Dolar |
| Ariha | Orm Eljoz | 1 | Available | 40 | Working | | | | 5115 |
| Ariha | Orm Eljoz | 2 | Available | 75 | Working | | | | 7378 |
| Ariha | Orm Eljoz | special pump | Available | 40 | Working | | | | 8250 |
| Ariha | Kafraziba | 1 | Not available | | | | | | |



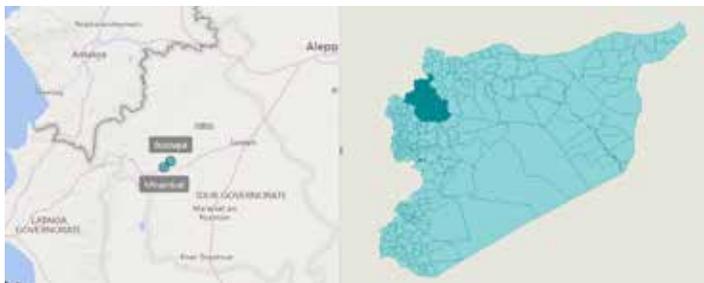
Orm Eljoz is a village with a population of 90,000 people, affiliated to the city of Ariha, it has 2 public water wells with pumps and private water well with a pump, 98% of the population has access to water by trucking, the water network needs to be expanded and restored, there is a need to operating cost to operate the pumps.

Kafraziba is a village with a population of 3200 people, it belongs to the city of Ariha, there are no water wells and pumps, 97% of the population gets water by trucking, there is a water network that needs to be repaired, there is a need to dig a water well.



| Sub_District | Location | Water network state | Tanks state | Water transport by trucks (Presentage) | Population | | | | |
|--------------|----------|----------------------------|----------------------------|--|--------------------|-------------------|--------------------|-----------------------------------|-----------------------------------|
| Mhambal | Bsanqul | Available, work and enough | Available, work and enough | 0.94 | 1500 | | | | |
| Mhambal | Mhambal | Available, work and enough | Available, work and enough | 1 | 20000 | | | | |
| Sub_District | Location | Station No | Water borehole state | Depth m | Exuberance m3/h | Diameter m | Static height m | | |
| Mhambal | Bsanqul | 1 | active | 290 | 30 | 0.35 | 250 | | |
| Mhambal | Bsanqul | 2 | active | 240 | 35 | 0.35 | 230 | | |
| Mhambal | Mhambal | 1 | active | 250 | 40 | 0.35 | 100 | | |
| Mhambal | Mhambal | 2 | active | 150 | 30 | 0.35 | 100 | | |
| Mhambal | Mhambal | 3 | active | 100 | 30 | 0.35 | 120 | | |
| Mhambal | Mhambal | 4 | active | 150 | 30 | 0.35 | 140 | | |
| Mhambal | Mhambal | 5 | active | 100 | 25 | 0.35 | 70 | | |
| Mhambal | Mhambal | 6 | active | 100 | 15 | 0.35 | 60 | | |
| Sub_District | Location | Station name | Pump availability | Capacity | Pump working state | Downtime by month | Reason of stopping | Estimated cost of repair by Dolar | Operating cost per month by Dolar |
| Mhambal | Bsanqul | 1 | Available | 75 | Working | | | | 12400 |
| Mhambal | Bsanqul | 2 | Available | 65 | Working | | | | 11780 |
| Mhambal | Mhambal | 1 | Available | 125 | Does not work | | | | 7750 |
| Mhambal | Mhambal | 2 | Available | 75 | Does not work | | | | 6200 |
| Mhambal | Mhambal | 3 | Available | 25 | Does not work | | | | 5580 |
| Mhambal | Mhambal | 4 | Available | 25 | Does not work | | | | 5580 |
| Mhambal | Mhambal | 5 | Available | 25 | Does not work | | | | 5580 |
| Mhambal | Mhambal | 6 | Available | 25 | Does not work | | | | 5580 |

Residency status



Bsanqul is a village that has 1500 inhabitants, there are 2 public boreholes with pumps that have stopped working due to the need for fuel. 94% of the population has access to water by trucking, the water network and tanks are in good condition. there is a need for an operational cost to operate the pumps.

Mhambal is a village with a population of 20,000 people, it has 6 water boreholes, all equipped with pumps that have stopped working due to the need for fuel, 100%of the population has access to water



ANNEXES

- Questionnaire form with the HHs / LINK
- Technical Survey form / LINK
- The collected data / LINK