



Water, sanitation and hygiene in Maksegnit, Amhara

Baseline survey factsheet

In November 2014, a baseline survey for the One WASH Plus programme was undertaken in Maksegnit town, Amhara and some of the surrounding satellite villages. The survey included five neighbouring villages Bahir Ginb (Bahir Ginb kebele), Jayra (Jayra kebele), Chinchaye (Chinchaye Degolo), Tsion and Seguage (Tsion Seguage). This factsheet presents a summary of key findings relating to water supply, sanitation and hygiene infrastructure and the services received by households and available at public institutions.

Key findings

Coverage with improved water supplies is high but the main piped water supply system functions intermittently and service levels are low in terms of reliability, quantity, and quality.

Improved water supplies in selected satellite villages (mainly from handpumps) do not provide safe water, and a significant minority rely for main access on unprotected surface water of springs.

Coverage with latrine facilities is lower than water supplies in both urban and rural areas, with open defecation especially in the satellite villages.

Schools and health institutions need to improve quality and sustainability of sanitation facilities

There is no regular liquid or solid waste collection and a poor sanitary environment.

Maksegnit is the main town in Gondor Zuria woreda of Amhara and is estimated to have a population of 14,240 based on CSA population projections (to July 2014; total urban woreda population being 27,176).

Important livelihoods in the town include formal employment, formal/informal businesses and trade as well as labour work, farming and weaving. Average annual household income was estimated from the survey at 19,883 Birr. Many households (29%) have a monthly income below 500 Birr (poverty line) with a further 37% having an income between 500 and 1,000 Birr and 34% have an income exceeding 1,000 Birr. In contrast, the main livelihood in the surrounding satellite villages is farming and average household income is about half the level of that in the town (10,252 Birr).

Public institutions include six schools and two health facilities in the town. The satellite villages included have a further six schools, one TVET college and four health facilities.

9% of households in Maksegnit town and 14% of households in the surrounding rural areas indicated that at least one household member suffered from diarrhoeal disease over the last two weeks.

Water services

The main type of supply for households (in the dry season) in the town is piped water to the yard/ plot (42%) while standposts also serve many users (19%). Handpumps are however the main source for 32% of households. In the satellite villages, most households collect water from protected communal wells with handpumps (73%). A significant minority in these villages rely for main access on unprotected surface water of springs (22%).

	Total	Rural	Urban
Piped water to yard/plot	28%	0%	42%
From other pipe water owners	1%	0%	1%
Public tap or standpipe (public fountain)	13%	0%	19%
Communal protected dug well / tubewell or borehole with handpump	46%	73%	32%
Rain water	1%	2%	0%
Protected spring	1%	2%	0%
Unprotected spring	5%	16%	0%
Cart with small tank/drum	1%	0%	2%
Surface water	3%	6%	1%
Don't know	1%	0%	2%

Water Infrastructure

Maksegnit has a piped water supply system managed by the Maksegnit town water supply and sewerage utility. The system includes one main source (although others are under construction) pumping up to two reservoirs in the town before distribution to households, stand pipes and institutions.

Number of sources	1
Number of reservoirs	2
Total storage capacity (m3)	110
Number of household connections	823
Number of public standpipes	10
Number of commercial connections	18
Institutional connections: schools (4), Health (1), Other public connections (13), Industrial connections (n.a.), Other connections (n.a.)	

Alternative water supplies have been developed within Maksegnit town to fill gaps in supply by the main piped system. Boreholes and wells with handpumps (total nine sources) have been developed especially close to the stream below the town.

Borehole with handpump	7
Hand dug well with handpump	31
Unprotected on-the-spot-spring	2

Functionality of infrastructure and service levels

The piped system is not reliable and provides only intermittent access with long queues for supply from standposts. Water quality is also a major concern with most samples contaminated (three out of five samples with E.coli exceeding 10 MPN/100ml) as might be anticipated from the intermittent operation and inadequate protection of water points.

Water point indicators for the rural areas are not very different to the town, although queuing is less problematic. Water quality is again a concern with three out of four samples exceeding 10MPN/100ml.

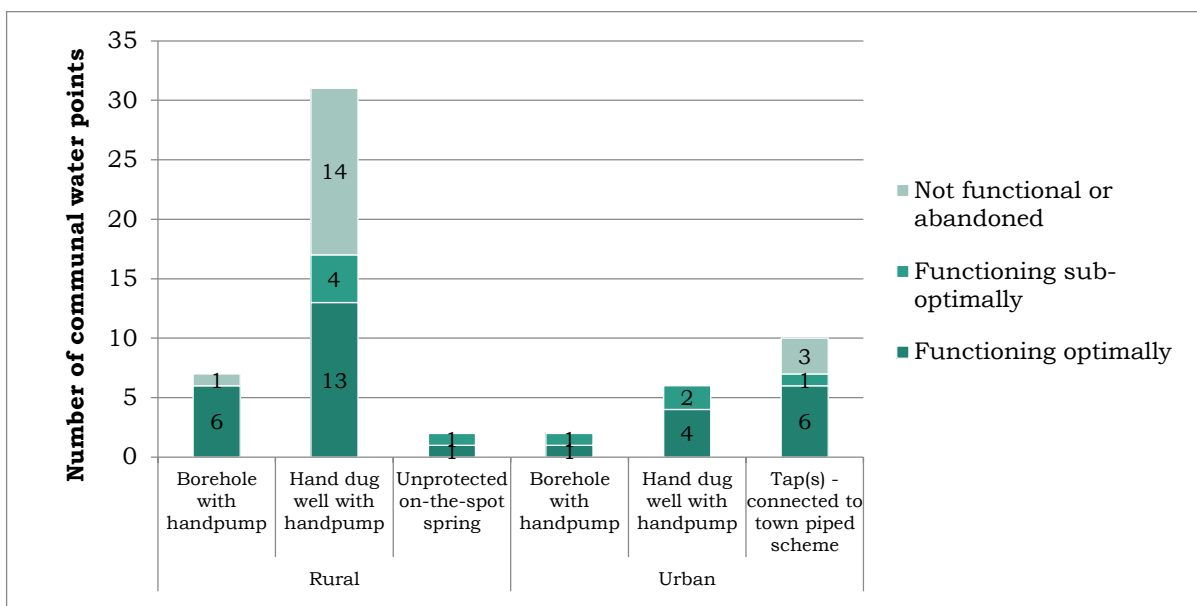


Photo: IRC

Services accessed by households in Maksegnit and the surrounding satellite villages are poor overall due to low reliability, queues and limited quantity of water supplied.

Table 5 Water service level accessed by households	Rural	Urban
Reliability (source available year-round and breakdowns < 3 days)	29%	14%
Spend less than 30 minutes on a round trip to fetch water	96%	91%
Queues for 30 minutes or less	37%	32%
Odour, colour, taste perceived acceptable	82%	84%
At least 15 litres per person in rural areas and 20 in urban areas	22%	30%

Despite high levels of coverage in the town, only 30% of households use enough water to meet the quantity norm. Satisfaction levels are low with respect to reliability, time and quantity in the town. Although satisfaction levels are a little higher, there is a rather similar level of service in the satellite villages.

Table 4 Water points: key service indicators	Rural	Urban
Average % days per year that the water point is functional	66%	76%
Average % households using water point living within 500m	86%	76%
Proportion of water points without queues of less than 10 people	79%	31%
Proportion of water points with perceived acceptable quality	84%	95%
Water points with low microbial contam. (E.coli <10 MPN/100 ml)	25%	29%
Average sanitary inspection score	60%	57%

Table 6 User satisfaction with water services	Rural	Urban
Satisfied with reliability	61%	27%
Satisfied with distance	73%	58%
Satisfied with time	63%	46%
Satisfied with quality	69%	89%
Satisfied with quantity	49%	33%

Sanitation and hygiene

In Maksegnit, 63% of households have latrine or toilet facilities, with 31% using improved latrines. Almost a quarter number of households, 23%, practice open defecation, while the remaining households make use of unimproved or unsafe sanitation facilities. In the satellite villages over half (53%) of households practice open defecation and while 36% make use of private latrines, only 3% have improved latrines with a proper slab.

Table 7 Household access to sanitation	Total	Rural	Urban
Ventilated improved pit latrine (VIP)	1%	0%	1%
Pit latrine with slab	21%	3%	30%
Latrine in the work place	1%	0%	1%
Private latrine / toilet owned by neighbour	5%	0%	7%
Public latrine	2%	5%	0%
Pit latrine without slab	32%	33%	32%
Bucket	6%	8%	6%
Bush/ open defecation	32%	53%	23%

Level of service provided and user satisfaction

Although the coverage with latrines in Maksegnit town is substantial, only 25% of households use latrines which are clean and without flies. Only 5% of households stated that their latrines have ever been emptied.

Table 8 Sanitation service level accessed by households	Rural	Urban
Latrine with wall and door	0%	18%
Latrine is clean without many flies	17%	25%
Latrine separates user from faeces	2%	37%
Human waste is collected	0%	5%

Table 9 User satisfaction with sanitation services	Rural	Urban
Satisfied with privacy	43%	62%
Satisfied with cleanliness	41%	57%
Satisfied with comfort	41%	60%
Satisfied with safety	39%	58%

Levels of satisfaction with sanitation are moderate in the town, but low on various dimensions of satisfaction in the satellite villages.

Handwashing practices

A low proportion (only 16%) of households reported that they practice handwashing at all six critical moments (before eating, after defecation, before preparing food, before feeding a baby, after cleaning a baby, after touching something dirty). In urban areas, the proportion was 16% and, in rural areas, 14%.

A greater number (28%) of interviewees washed their hands with water and soap or ash when asked to show how they do it. In urban areas, the proportion was 36% and in rural areas, 12%.

Liquid waste management

The Municipality is responsible for liquid waste management. There is however no liquid waste collection, transportation or treatment facility in Maksegnit itself. The Municipality occasionally arranges to bring a vacuum truck from Gondor which is mostly used by business and commercial facilities.

Solid waste management

There is no primary or secondary solid waste collection system in Maksegnit and sanitary conditions are poor as a result.

In the town, 47% of households burn their wastes within or outside their compound and 45% of households use a pit or pile garbage outside.

Institutional WASH

In the town, all health facilities and half the schools get water from the piped system.

Table 10 Institutional sanitation

	Rural		Urban	
	Health facility	Schools	Health facility	Schools, TVET, college
Number of institutions	4	6	2	5
with latrines with walls and doors	2	4	2	2
with latrines that are clean	1	2	1	1
with latrines separating faeces from user	2	4	2	7
where human waste is collected	0	0	0	0
with ALL of the above	0	0	0	0
with menstrual disposal	1	1	2	0
with separate facilities for males and females	0	3	1	2
with all males reported to use the facilities	0	1	1	1
with all females reported to use the facilities	0	1	1	1

The other schools depend on unprotected sources. The Tsion Seguage health post in the rural area around Maksegnit does not have a source of water supply, nor sanitation facilities. The other three rural health posts do have improved water supply and sanitation facilities. The Primary 1-4 (first cycle) schools in Gaga and Degolaas do not have improved water supply nor improved sanitation facilities. The four other schools do have improved sanitation facilities, but only two also have improved water supply.

The use of institutional latrines was very low, especially amongst men. In 14 institutions with latrine facilities, less than half the men made use of these, while latrine use amongst women was low for only five institutions.

Most institutions have sanitation facilities that could be improved in terms of quality and sustainability. None of the public facilities met all criteria for privacy, cleanliness and collection. The picture is similar for rural and urban facilities at schools and health centres.

Conclusions

- While coverage of the town water supply system is high, with 94% of urban residents having access to an improved source (either piped water to the yard/plot, using a standpost or an alternative handpump) the piped water supply system only functions intermittently;
- Only 30% urban households use at least 20 lpcd water;
- Measured microbial water quality (E. coli) was generally unsatisfactory;
- Water supplies in the selected satellite villages (mainly from handpumps) also have scope for improvement with water quality also a main concern;
- Coverage with latrine facilities is lower than water supplies in both urban and rural areas, and open defecation was practised by 23% of households in the town and 53% of households in satellite villages;
- Schools and health institutions have sanitation facilities but these could be improved in quality and sustainability;
- There is no organised solid or liquid waste collection and the environment is generally unsanitary.



About One WASH Plus

Further information on baseline study findings from Maksegnit and other towns are discussed in the main baseline report. The report is available from UNICEF.

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Planned One WASH Plus interventions in Maksegnit

Plans being developed under the One WASH Plus project include supporting the utility in Maksegnit to develop a phased programme of improved piped water supplies and alternative water sources. This will include new boreholes, power supplies and pipelines to serve Maksegnit and its satellite villages (Bahir Gimb, Chinchaye, Jaraye Tsion and Aguash) through a connected system. The satellite villages will be serviced with public stand pipes. Two new reservoirs are also planned. The primary distribution network will be extended from around 5 km total length to over 23 km, and a secondary distribution network of 33 km is anticipated. The design incorporates plans to expand capacity after 2025 through further new pipelines. Although final design alternatives may vary the system, total costs of water works are estimated at US\$ 2.7 million.

A sanitation master plan will be developed for the town with facilities improved at public institutions (schools, health centres, prison) and places, and new solutions found to solid and liquid waste disposal. Integrated promotion of sanitation and better hygiene practices and improvements in solid waste management are expected to lead to better living conditions and health improvements.