



Water, sanitation and hygiene in Adishihu, Tigray

Baseline survey factsheet

In November 2014, a baseline survey for the One WASH Plus programme was undertaken in Adishihu town, Tigray Region and some of the surrounding satellite villages (in Atsela and Tekea kebeles). This factsheet presents a summary of the key findings relating to water supply, sanitation and hygiene infrastructure and the services received by households and available at public institutions.

Key findings

Coverage of the town water supply system is relatively high. However, services are compromised with respect to reliability and water quality.

Sanitation coverage is higher in the town than in the surrounding rural areas.

Most schools and health institutions in the town and surrounding rural areas have WASH services. However, these are often sub-standard.

Adishihu is the only town in Emba Alaje Woreda in the Tigray Region of Ethiopia with a projected population of 10,771 people (CSA projection to July 2014).

The most common livelihood in the town according to survey responses is informal or formal business or trade representing 48% of those surveyed. Employment and farming are also important. In the surrounding villages, most are farming families (96%).

In Adishihu town, a relatively large proportion of households (60%) reported to have a monthly income of over 1,000 Birr. While 14% have a monthly income below the poverty line of 500 Birr. In the surrounding rural areas, the proportion of households that reported a monthly income of over 1,000 Birr was also relatively high (48%), while 12% reported to have a monthly income of 500 Birr or less.

There are four schools, two health facilities and two public latrines in the town and four schools and one health facility in the surrounding rural areas.

5% of households in Adishihu town and 2% of households in the rural areas indicated that at least one household member suffered from diarrhoeal disease over the last two weeks.

Water services

In Adishihu town, the main type of supply for households (in the dry season) is household connections either to the yard (40%) or into the dwelling (27%). About a quarter of households collect water from the public standposts. In the rural areas, households mainly use handpumps as their main source of (dry season) water supply water.

Table 1 Main source of household water supply in the dry season	Total	Rural	Urban
Piped water into dwelling	18%	0%	27%
Piped water to yard/plot	27%	0%	40%
Public tap or standpipe (public fountain)	17%	4%	24%
Communal protected dug well / tubewell or borehole with handpump	28%	82%	1%
Protected spring	5%	6%	4%
Unprotected spring	1%	4%	0%
Surface water	4%	4%	4%

Water Infrastructure

Adishihu has a piped water supply system managed by the Adishihu Water Utility Service. The source for the piped system is a spring which is located close to the town.

Table 2 Key features of urban piped water system	
Number of sources	1
Number of reservoirs	2
Total storage capacity (m3)	100
Number of household connections	687
Number of public standpipes	11
Number of commercial connections	32
Institutional connections: schools (4), Health (1), Other public connections (3), Industrial connections (n.a.), Other connections (0)	

Springs are a common feature in the villages surrounding Adishihu. Many are protected springs providing on-the-spot water supplies to nearby households. Furthermore, there are four handpumps in the villages surveyed.

Table 3 Water points in satellite villages	
Borehole with handpump	3
Hand dug well with handpump	1
Protected on-the-spot spring	10

Functionality of infrastructure and service levels

The spring source that supplies the piped system was fully functioning at the time of the survey and was reported to have been operational throughout the year. Of the 11 standposts in Adishihu town, nine were working. However, seven of these were functioning sub-optimally, with one or more of the taps of the standpipe not functioning.

As well as reliability, water quality is concern. Only three of five samples taken from the standposts had low risk E.coli concentrations (<10MPN/100ml) for human consumption.

In the rural areas, six of the ten protected springs and one of the handpumps were not functional or abandoned at the time of the survey. The services provided by the functional rural water points generally provided reliable and accessible water services with acceptable water quality (water from five supplies all had E. coli concentrations <10PN/100ml).

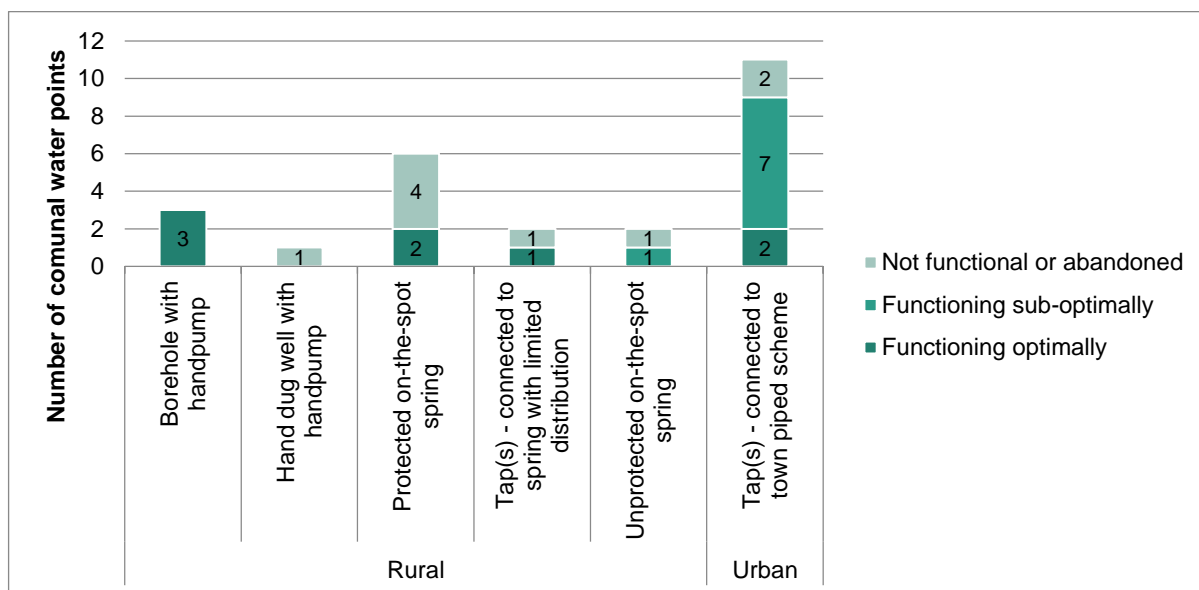


Photo: IRC

The proportion of urban households that had access to reliable water services is low according to the household survey, and services score poorly in terms of quantity used by households and in some cases long queues. Nevertheless, the majority of households were satisfied with the different aspects of their urban water services.

	Rural	Urban
Average % days per year that the water point is functional	100%	75%
Average % households using water point living within 500m	86%	88%
Proportion of water points without queues of less than 10 people	80%	100%
Proportion of water points with perceived acceptable quality	100%	100%
Water points with low microbial contam. (E.coli <10 MPN/100 ml)	100%	60%
Average sanitary inspection score	50%	n.a.

	Rural	Urban
Reliability (source available year-round and breakdowns < 3 days)	80%	25%
Spend less than 30 minutes on a round trip to fetch water	100%	100%
Queues for 30 minutes or less	100%	79%
Odour, colour, taste perceived acceptable	88%	97%
At least 15 litres per capita (lpcd) in rural areas and 20 in urban areas	24%	42%

In the rural area, the proportion of households satisfied with the accessibility of their water services was lower than in the town. Water use was found to be low, as only 24% of families reported to use at least 15 litres lpcd.

	Rural	Urban
Satisfied with reliability	82%	83%
Satisfied with distance	66%	82%
Satisfied with time	68%	80%
Satisfied with quality	80%	96%
Satisfied with quantity	84%	88%

Sanitation and hygiene

In Adishihu town, 83% of households make use of latrines or toilets. However, only 50% of urban households use improved private latrines and a significant number (17%) still rely on open defecation. In the rural areas, the proportion of households that make use of sanitation facilities is much smaller. Here, 70% of households practice open defecation

Table 7 Household access to sanitation	Total	Rural	Urban
Ventilated improved pit latrine (VIP)	5%	0%	8%
Pit latrine with slab	26%	4%	38%
Composting toilet	8%	17%	4%
Private latrine / toilet owned by neighbour	1%	0%	1%
Pit latrine without slab	24%	9%	32%
Bush/ open defecation	36%	70%	17%

Level of service provided and user satisfaction

The proportion of households with clean sanitation facilities is very low, especially in the rural areas. Furthermore, only 2% of households surveyed in Adishihu town and none of the households in the rural areas stated that their latrines have ever been emptied.

Table 8 Sanitation service level accessed by households	Rural	Urban
Latrine with wall and door	0%	41%
Latrine is clean without many flies	6%	29%
Latrine separates user from faeces	4%	44%
Human waste is collected	0%	2.2%

Table 9 User satisfaction with sanitation services	Rural	Urban
Satisfied with privacy	24%	69%
Satisfied with cleanliness	30%	74%
Satisfied with comfort	26%	66%
Satisfied with safety	26%	69%

In Adishihu town about two thirds of the households expressed satisfaction with the different aspects of their sanitation facilities, while this was less than one third in the rural areas.

Handwashing practices

Only 25% of households in the town and 4% in the rural areas 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).

When asked to show how they do it, 40% of urban respondents and 14% of the rural respondents washed their hands with water and soap or ash and in the rural areas.

Liquid waste management

The municipality is responsible for liquid waste management. However, there is no liquid waste collection, transportation or treatment facility in Adishihu.

Solid waste management

In the town, waste from 48% of households is collected and taken away on a regular basis by informal providers. Most of the other urban households dump their solid waste in a pit or garbage pile (24%) or litter it on the ground (18%).

In the rural areas households dump solid waste in their garden or practice composting (33%) or leave as litter on the ground (22%).

Institutional WASH

Except for one public latrine which gets water through a cart with small drum, all public institutions in Adishihu town are connected to the piped system. However, the piped connections of three of the four schools and of the public latrines were not functional at the time of the survey.

Table 10 Institutional sanitation

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

The rural health centre does not have its own source of water supply, but relies on water from a nearby protected dug well. One of the rural schools does not have a water supply either, while the other three rural schools each have different sources of water supply: piped water supply, (non-functional) rooftop rainwater harvesting and a handpump.

All public institutions had improved sanitation facilities. However, human waste was only collected from one school and one health facility and many institutional sanitation facilities were not clean.

Conclusions

- Coverage of the town piped water supply system is high. However, reliability of water services is a concern and the quality and quantity of water supplied are not always adequate;
- The surrounding rural areas are mainly served by protected spring sources and handpumps;
- Water use is low, with only 42% of urban households using at least 20 lpcd and 24% of rural households using at least 15 lpcd;
- Coverage with sanitation facilities is considerably higher in the town than in the surrounding rural areas;
- Public institutions all have improved sanitation facilities. However, there are challenges in maintaining clean facilities.



About One WASH Plus

Further information on baseline study findings from Adishihu 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 Adishihu

The approach being developed under the One WASH Plus project includes an integrated package of improvements to water, sanitation and hygiene infrastructure and services.

As well as improved water supplies in the town, separate supplies to satellite villages are proposed through provision of new hand dug wells with handpumps, and in one case, rainwater harvesting.

A sanitation master plan is also being developed for the town with facilities and use to be improved at households and public institutions (schools, and health facilities), and new solutions found for 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.