

Assessment of FY18-19 water, sanitation and hygiene service levels



WaterAid Timor-Leste

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WaterAid

Overview



WaterAid/ Jerry Galea

Globally, the predominant monitoring metric for almost all directly supported water, sanitation and hygiene (WASH) service delivery work is the number of people with access to services. Calculating the number of people supported can provide a general sense of scale, which is reassuring for some donors and decision-makers.

However, the metric fails to provide any evidence on the quality or universality of supported WASH services at the local level. The exclusion of these factors is at odds with analysis conducted by the Joint Monitoring Program (JMP) in relation to Sustainable Development Goal (SDG) 6 as well as findings from research that highlight the importance of sustaining universal access to quality WASH services.

For these reasons, WaterAid Australia initiated a more detailed analysis of available data for nine communities, supported in financial year 2018-19, across two municipalities (districts), in Timor-Leste. This paper sets out findings from that review, which will be used to inform future programming decisions and initiatives to sustain universal access to quality WASH services.

Summary

This paper presents changes in water, sanitation and hygiene (WASH) service levels for nine communities WaterAid Timor-Leste worked with in financial year 2018-19, focusing particularly on people's quality of service and whether communities attained universal access to improved WASH services.

Service data was collected and reviewed using RapidWASH 1.0 – an open-access, smartphone-based data collection system collaboratively developed by mWater,

WaterAid and IRC, and funded by the Australian Aid program. Services were rated as 'no service', 'substandard', 'basic', and 'improved' based on self-defined criteria.

Table 1 presents scores representing each communities' progress towards achieving universal access to improved services, with a score '0' representing universal 'no service' and a score of '3' representing attainment of universal access to 'improved' services.¹

Table 1 Communities' water, sanitation and hygiene service level ratings at endline

Municipality	Community Name	Endline service level score		
		Water	Sanitation	Hygiene
Liquica	Tobauk 1	3	2.54	3
	Tobauk 2	3	2.6	3
	Kamareudu/Hatulema	3	2.45	2.43
	Leb Metan	3	2.56	2.87
Manufahi	Fanolelo	3	2.26	2.82
	Blaro A	2.5	2	3
	Blaro B	2.51	1.75	3
	Mausiga	3	2.08	3
	Foeto	2.5	2.18	3

¹ Final scores are the numerical average endline service level attained by every household in a community, where 'no service' = 0, 'substandard' = 1, 'basic' = 2 and 'improved' = 3. The water and sanitation scores comprise two indicators - access and household water quality for water, and access and use for sanitation – while the hygiene score reflects a single indicator (handwashing infrastructure access).

As can be seen from Table 1, water services received the highest possible score (3) in six out of nine communities, reflecting universal access to an improved water source in (or near) to people's home, with water perceived to be of 'good' quality. Lower scores in Blaro A, Blaro B and Foeto reflect household water quality being rated by all or some households in these communities as only 'acceptable'.

Similarly, six of nine communities (albeit a different six) recorded universal improved hand-washing access, meaning every household had a handwashing station near the toilet with both water and handwashing aid (soap or ash) available. Although all households in the remaining three communities (Kamareudu/Hatulema, Leb Metan and Fanolelo) had access to a handwashing station with water at end-line, lower scores reflected that not all households in these communities had soap or ash available.

Scores for sanitation services were lower than water or hygiene, reflective of the high number of substandard toilets across communities when end-line was collected. However, this result should be considered in light of the team's use of the Community-Led Total Sanitation (CLTS) approach, and the disconnect between the aims of CLTS and our service level criteria. Our ratings for sanitation service levels are based on people having access to an improved toilet that hygienically separates them from excreta, however CLTS as an approach seeks only to eliminate open defecation and does not specify technical standards for toilets built. Given this, the progress and achievements made through supported work should be seen as successful, with universal access to a toilet in all nine communities at endline (i.e. open defecation has been eliminated).

It is also locally appropriate, given that CLTS is recognised in the 2012 National Basic Sanitation Policy as the lead approach to improving sanitation coverage in Timor-Leste. However, findings also point to the need for ongoing efforts to lift sanitation service levels across all communities, which is a focus for future work and aligned to national priorities.

A more detailed analysis of data is set out on the following pages, including a breakdown of water, sanitation and hygiene service levels at baseline and endline for each community. Service level data is available across five indicators: water access; household water quality; sanitation access; sanitation use; and handwashing access.

It should be noted that RapidWASH indicators have now been aligned with those used by the JMP in monitoring SDG 6. These improvements will enhance our ability to analyse data and present it in alignment with SDG 6 service levels.

While this review illustrates the quality of supported service delivery work, we recognise it could be complemented with longitudinal monitoring to help deepen our understanding of factors affecting the sustainability of access to equitable, universal, quality WASH services.

Review of FY18-19 data

Data collection process

Service data was collected and reviewed using RapidWASH 1.0 - an open-access system collaboratively developed between mWater, WaterAid and IRC, and funded by DFAT. RapidWASH consists of smartphone-based data collection (through mWater surveyor) and a management portal that automatically conducts data analysis. The intention is that RapidWASH is used for longitudinal assessment and tracking of program performance. For the purposes of this paper, services are scored as 'no service' 'substandard', 'basic' and 'improved', based on a set of criteria predetermined by WaterAid staff and linked to global SDG definitions. More detail about the RapidWASH system, and the associated monitoring practice, is available in [this paper](#).

Community-level service data was collected both prior to project commencement (baseline) and again after completion (endline). Duration between baseline and endline data collection ranged from approximately six months up to a year. During the baseline phase, community engagement officers from local NGO partners interviewed all heads of household within the project areas, asking both

demographic questions and a set of 27 questions related to household experiences of WASH services, and household's WASH-related practices. Community engagement officers validated answers by completing a series of observational questions. Endline data collection was used to measure the improvement in WASH service levels post-project implementation. Endline data collection involved community engagement officers returning to communities to repeat the same survey with heads of households.

A list of the communities, and their demographic details (number of households and total population) are presented in Table 2.

While noting that demographics (either number of households, people, or both) shifted between baseline and endline in all communities, no information was recorded in the endline data explaining these changes. Without this information we are unable to explain the cause of the shifts. We will seek to improve on this in future data collection, although note this will likely remain a challenge.

Table 2 Demographic information of FY18-19 project communities

Municipality	Community Name	Demographics
Liquica	Tobauk 1	B: 28 households, 218 people E: 25 households, 192 people
	Tobauk 2	B: 5 households, 36 people E: 5 households, 34 people
	Kamareudu / Hatulema	B: 18 households, 133 people E: 16 households, 131 people
	Leb Metan	B: 24 households, 228 people E: 24 households, 211 people
	Obal	B: 22 households, 191 people Endline not available
Manufahi	Fanolelo	B: 18 households, 165 people E: 17 households, 138 people
	Blaro A	B: 8 households, 79 people E: 5 households, 38 people
	Blaro B	B: 27 households, 228 people E: 34 households, 282 people
	Mausiga	B: 11 households, 75 people E: 12 households, 97 people
	Suco Holarua	B: 3 households, 11 people Endline not available
	Foeto	B: 13 households, 102 people E: 11 households, 89 people

Analysis of service levels by community

For the purposes of this analysis, we have looked at only a sub-set of five indicators – water access, household water quality, sanitation access, sanitation use, and hand washing infrastructure – which align with the approach for monitoring, analysing and reporting changes in WASH access outlined in the ‘Guidance for monitoring WASH access and service quality’ paper, available from WaterAid Australia upon request.

We have also excluded two communities from this analysis, Obal in Liquica and Suco Holarua in Manufahi. A decision was made not to undertake service delivery work in Obal this year, while endline data was not available for Suco Holarua at the time this report was completed. All data on the following pages is based on the nine remaining communities - Tobauk 1, Tobauk 2, Kamareudu/Hatulema and Leb Metan in Liquica, and Fanolelo, Blaro A, Blaro B, Mausiga and Foeto in Manufahi.

i. Water

a. Household water quality:

Measures of water quality were based on whether households were using an improved water source, and the perceived quality of water accessed.

With respect to perceived water quality, Manufahi communities recorded higher baseline service levels than those in Liquica. In

Manufahi a small majority of households (53%, n=41) reported ‘no service’ at baseline, and only one of five communities (Blaro A) had 100% of households reporting having ‘no service’. The majority of households in Liquica (89%, n=67) reported having ‘no service’ (relying on an unimproved source such as local stream as their primary water source), with three of four communities assessed as having 100% of households with ‘no service’ at baseline.

Despite recording lower baseline service levels than Manufahi communities, endline service levels were higher in Liquica. At time of endline, universal ‘improved’ water quality (household using an improved source and water quality perceived as good) was recorded in each of the four Liquica communities. However, universal ‘improved’ water quality was reported in only two of five Manufahi communities (Fanolelo and Mausiga), with a further two communities (Blaro A and Foeto) reporting universal ‘basic’ water quality (household using an improved source and water quality perceived as acceptable). The remaining community, Blaro B, had a mix of service levels - 20% (n=1) ‘no service’, 80% (n=4) ‘basic’ and 20% (n=1) ‘improved’.

Detailed service ladders for household water quality at baseline and endline across all communities are presented in Table 3.

Table 3 Baseline and endline household water quality service status, by community

Municipality	Community Name	Service level
Liquica	Tobauk 1	<p>Baseline: 100% Endline: 100%</p>
	Tobauk 2	<p>Baseline: 100% Endline: 100%</p>
	Kamareudu / Hatulema	<p>Baseline: 100% Endline: 100%</p>
	Leb Metan	<p>Baseline: 65% (red), 35% (green) Endline: 100% (green)</p>
Manufahi	Fanolelo	<p>Baseline: 40% (red), 60% (green) Endline: 100% (green)</p>
	Blaro A	<p>Baseline: 100% (red) Endline: 100% (green)</p>



Rating	Criteria
Improved	Household uses improved source and water quality perceived as good
Basic	Household uses improved source and water quality is perceived as acceptable
Substandard	Household uses improved source and water quality is perceived as poor
No service	Household uses unimproved source

b. Access:

Water access was measured based on the location of primary water source (on/off premises) and the user's perception of the time to collect water.

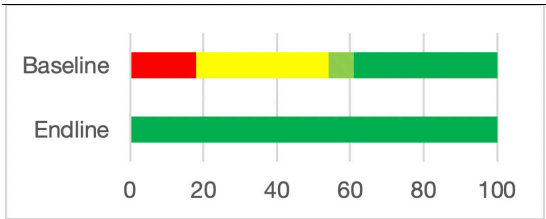
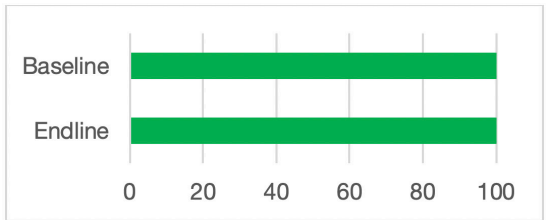
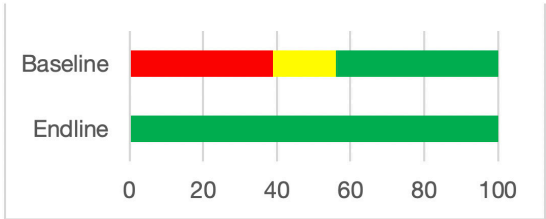
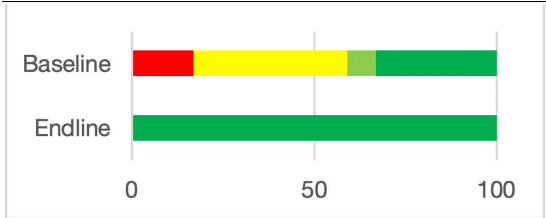
Of the two municipalities, Manufahi again recorded higher levels of water services during project baselines, compared to Liquica, with 82% of households (n=63) already having 'improved' access to water (primary water source located within household's yard/plot), and just a single household with no service (access to water sources outside their yard/plot and stated that they spend too much time collecting water). Conversely, only 43% of Liquica households (n=32) had 'improved' access at baseline, with 21% (n=16) having 'no service'.

At baseline both municipalities contained one community which had already recorded universal access to 'improved' water - Tobauk 2 in Liquica, and Fanolelo in Manufahi.

Despite the initial disparity between the percentage of households with improved access to water between municipalities, by endline every household in each of the nine communities reported 'improved' access, having access to a tapstand within, or very close, to their yard/plot, with water reported as "very quick to collect".

Detailed service ladders for water access at baseline and endline across all communities are presented in Table 4.

Table 4 Baseline and endline water access service status, by community

Municipality	Community Name	Service level
Liquica	Tobauk 1	
	Tobauk 2	
	Kamareudu / Hatulema	
	Leb Metan	

Municipality	Community Name	Service level
Manufahi	Fanolelo	 <p>Baseline: 100% (Green)</p> <p>Endline: 100% (Green)</p>
	Blaro A	 <p>Baseline: 35% (Yellow/Green)</p> <p>Endline: 100% (Green)</p>
	Blaro B	 <p>Baseline: 10% (Red/Yellow/Green)</p> <p>Endline: 100% (Green)</p>
	Mausiga	 <p>Baseline: 35% (Light Green/Green)</p> <p>Endline: 100% (Green)</p>
	Foeto	 <p>Baseline: 25% (Yellow/Green)</p> <p>Endline: 100% (Green)</p>

Rating	Criteria / Standard / Definition
Improved	In home or yard/plot
Basic	Outside home or yard/plot but quick or not long time to collect
Substandard	Household perceives water takes a long time to collect
No service	Household perceives water takes too long to collect

ii. Sanitation

a. Access:

As for water services, sanitation access again differed between the two municipalities. However, service levels were inverted, with households in Liquica having higher level of service than those in Manufahi, true at both baseline and endline.

At baseline, just 12% of Liquica households (n=9) had 'no service' (no access to a toilet), while 36% (n=27) reported 'improved' sanitation access (household has its own improved toilet). In contrast, among Manufahi households 39% (n=30) of households had no sanitation service, with only 3% (n=2) using an 'improved' toilet.

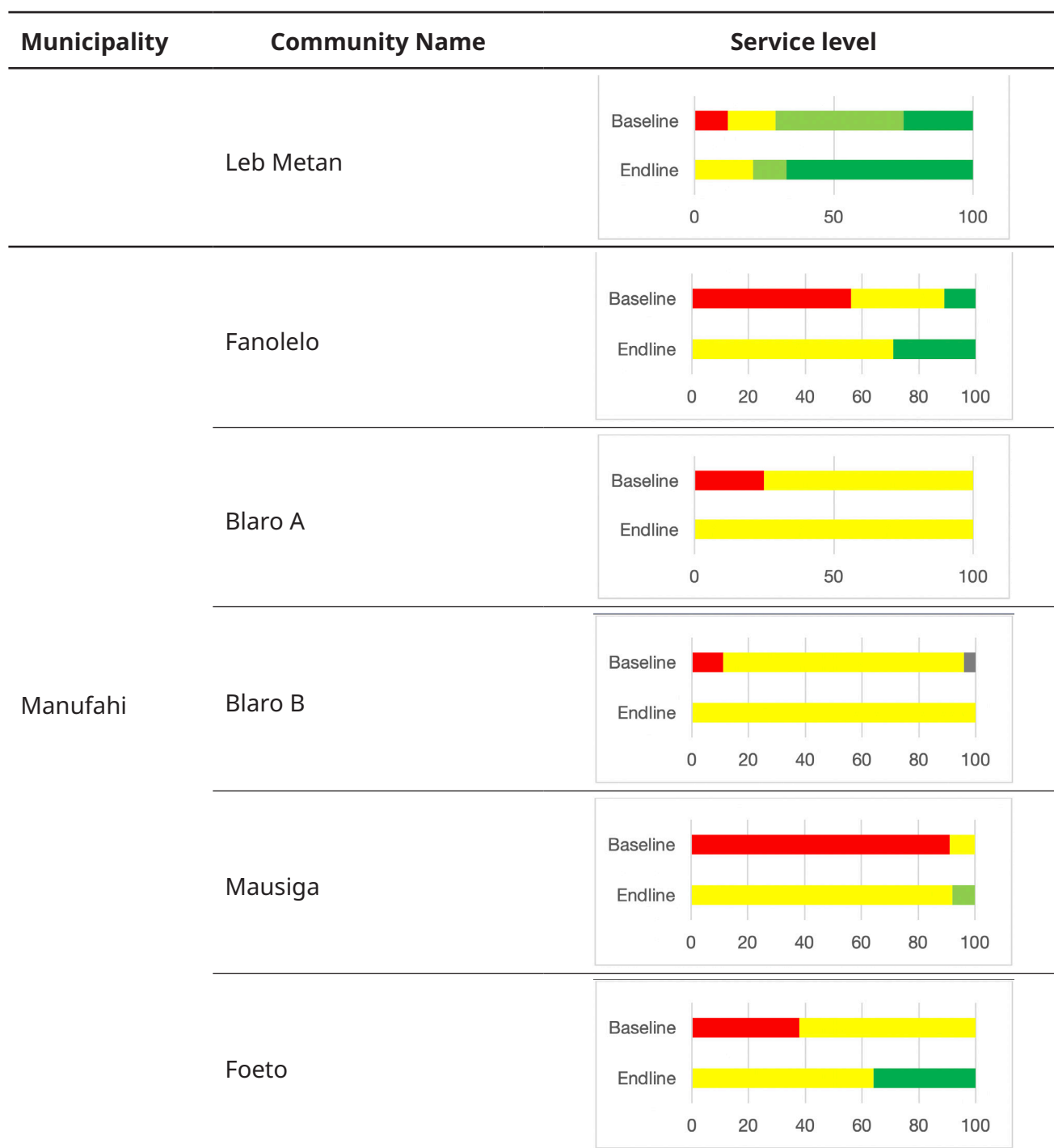
By endline, all 'no service' households had been eliminated across all communities in both municipalities. Despite eliminating open defecation, only one community, Tobauk 2 in Liquica, managed to achieve universal access to at least a 'basic' level of sanitation (a shared improved toilet). The remaining communities

achieved a mix of 'substandard', 'basic' and 'improved' service levels among households. 'Substandard' sanitation (household has access to an 'substandard' toilet) access was the most common endline service level, with the proportion of 'substandard' sanitation access more pronounced in Manufahi. As discussed in the summary on page 3 of this document, while the term 'substandard' may come with negative connotations it is important to note that this result meets the minimum requirements for communities achieving Open Defecation Free status – which is the current aim of the Timorese Government and what WaterAid Timor-Leste was aiming for in their FY18-19 service delivery work.

Detailed service ladders for sanitation access at baseline and endline across all communities are presented in Table 5.

Table 5 Baseline and endline sanitation access service status, by community

Municipality	Community Name	Service level
Liquica	Tobauk 1	
	Tobauk 2	
	Kamareudu / Hatulema	



Rating	Criteria / Standard / Definition
Improved	Household has its own improved toilet
Basic	Household has access to a shared improved toilet
Substandard	Household has access to an unimproved toilet
No service	Household does not have access to a toilet
No data	No data

b. Use:

Service levels for sanitation usage were scored on a combination of usage and satisfaction with service. It should be noted that baseline usage data was not recorded for a large number of households, particularly in Manufahi, meaning we do not have an entirely clear picture of baseline service levels. Reasons for these gaps are unclear.

By endline, four of the five Manufahi communities recorded at least universal 'basic' usage levels (everyone in the household uses the toilet and they are at least somewhat satisfied with it). Two of these communities, Blaro A and Mausiga, achieved universal 'improved' usage (everyone in the household uses the toilet and they are satisfied with it). The proportion of 'substandard' usage (not everyone in the household uses the toilet, but they are

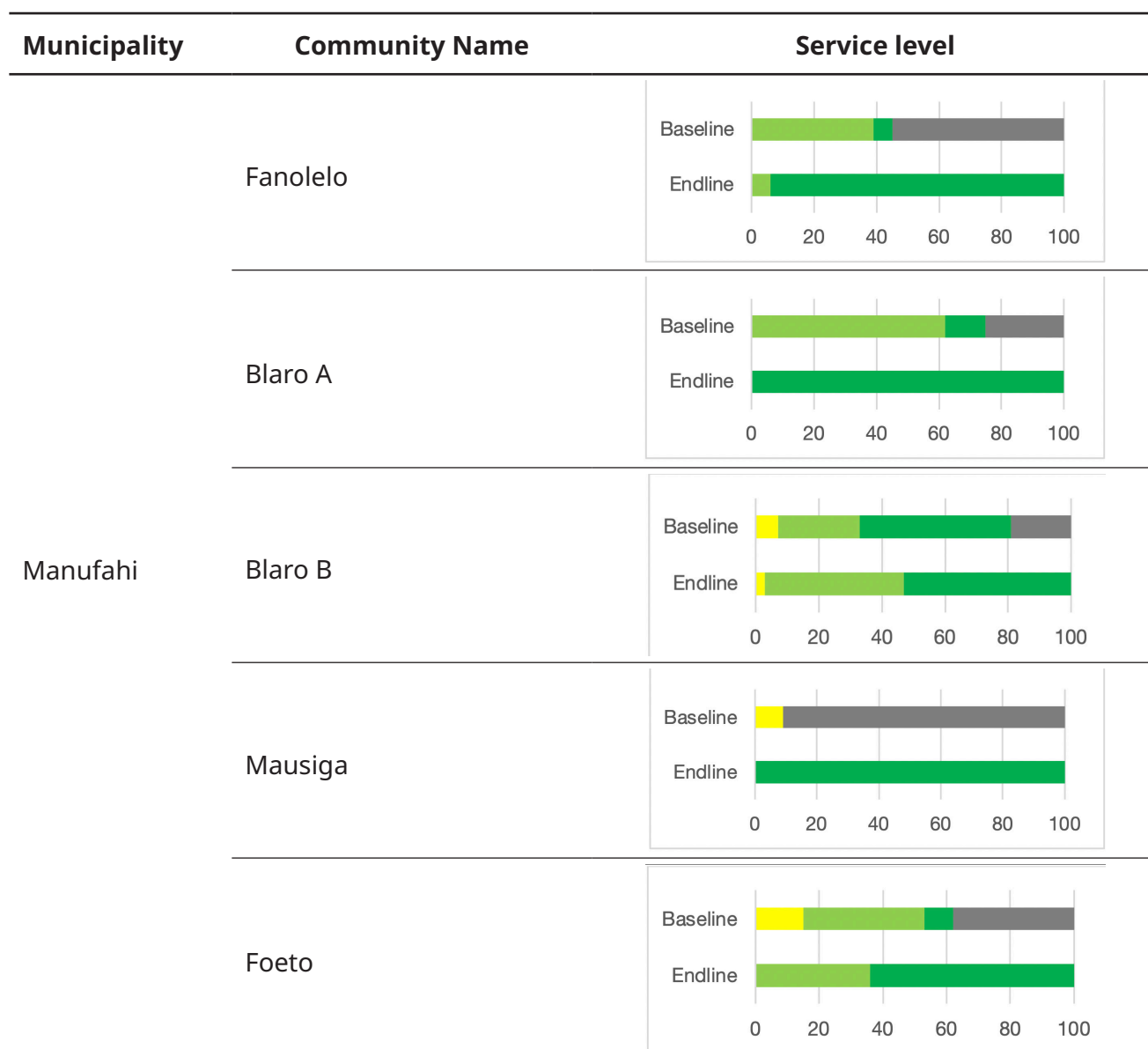
somewhat satisfied with it) in the remaining community, Blaro B, was small, representing only a single household.

Conversely, only one of four Liquica communities achieved universal 'basic' usage by the endline, with a small minority of 'substandard' usage reported in two communities, Tobauk 1 and Leb Metan. A single household in Kamareudu/Hatulema did not report usage data at endline, so we're unable to draw a conclusion about the final status achieved for this community. However, it should be noted that the other 15 households in this community all reported 'improved' usage.

Detailed service ladders for sanitation use at baseline and endline across all communities are presented in Table 6.

Table 6 Baseline and endline sanitation usage service status, by community

Municipality	Community Name	Service level
Liquica	Tobauk 1	<p>Baseline: 85% improved, 15% substandard</p> <p>Endline: 100% improved, 0% substandard</p>
	Tobauk 2	<p>Baseline: 60% improved, 40% substandard</p> <p>Endline: 100% improved, 0% substandard</p>
	Kamareudu / Hatulema	<p>Baseline: 75% improved, 25% substandard</p> <p>Endline: 100% improved, 0% substandard</p>
	Leb Metan	<p>Baseline: 75% improved, 25% substandard</p> <p>Endline: 100% improved, 0% substandard</p>



Rating	Criteria / Standard / Definition
Improved	Everyone in the household uses the toilet and they are satisfied with it
Basic	Everyone in the household uses the toilet and they are somewhat satisfied with it
Substandard	Not everyone in the household uses the toilet but they are at least somewhat satisfied with it
No service	Not everyone in the household uses the toilet or they are unsatisfied with it
No data	No data

iii. Handwashing

a. Access:

Access scores were based on the presence of a handwashing facility near a toilet, availability of water, and presence of handwashing aid (soap or ash). Note that this measures infrastructure presence only, and does not measure handwashing behavior.

As for water and sanitation service levels disparities on hand washing were again present between the two municipalities at baseline, with communities in Liquica recording lower baseline service levels, including one community (Tobauk 2) which had universal 'no service' (no handwashing facility) at baseline.

Despite this initial disparity, by endline all households in each of the nine communities across Liquica and Manufahi reported at least 'basic' access (handwashing facility near the toilet with water, but no soap/ash). Four of five Manufahi communities, and two of four Liquica communities achieved universal 'improved' access (handwashing facility near the toilet with water and soap/ash).

Detailed service ladders for handwashing access at baseline and endline across all communities are presented in Table 7.

Table 7 Baseline and endline handwashing access service status, by community

Municipality	Community Name	Service level
Liquica	Tobauk 1	
	Tobauk 2	
	Kamareudu / Hatulema	
	Leb Metan	



Rating	Criteria / Standard / Definition
Improved	Handwashing facility near the toilet with water and soap/ash
Basic	Handwashing facility near the toilet with water but no soap/ash
Substandard	Handwashing facility near the toilet with no water
No service	No handwashing facility
No data	No data

WaterAid

Level 9, 176 Wellington Parade,
East Melbourne VIC 3002
info@wateraid.org.au
Fax: 03 9001 8260

