

# USAID Transform WASH Products and Services - Innovations and Sales Performance



Learning Note, May 2024



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USAID Transform WASH aims to improve water, sanitation, and hygiene (WASH) outcomes in Ethiopia by increasing market access to and sustained use of a broader spectrum of affordable WASH products and services, with a substantial focus on sanitation.

Transform WASH achieves this by transforming the market for low-cost high quality WASH products and services: stimulating demand at the community level, strengthening supply chains, and improving the enabling environment for a vibrant private market.

USAID Transform WASH is a USAID-funded activity implemented by PSI in collaboration with SNV and IRC WASH. The consortium is working closely with government agencies, including the Ministry of Health, the Ministry of Water and Energy, the One WASH National Program coordination office, the Ministry of Labor and Skills, and regional and sub-regional governments.

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This learning note summarizes the findings related to USAID Transform WASH's sanitation and hygiene products and services introduced and supported in Ethiopia.

#### **Authors:**

Muhammed Ebrahim Mussa, IRC Ethiopia  
Lars Osterwalder, IRC Ethiopia  
Ephraim Mebrate, IRC Ethiopia

#### **Reviewers:**

Dagim Demirew, PSI Ethiopia  
Michael Negash, PSI Ethiopia  
Bacha Kitesa, PSI Ethiopia  
Ayatam Simeneh, PSI Ethiopia

#### **Editors:**

Sterenn Philippe, IRC  
Tettje van Daalen, IRC

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## Abbreviations and Glossary

<b>ETB</b>	Ethiopian Birr (55 ETB/USD in December 2023)
<b>FGD</b>	Focus group discussion
<b>GiN</b>	USAID Growth through Nutrition
<b>HEW</b>	Health extension worker
<b>HH</b>	Household
<b>JMP</b>	WHO/UNICEF Joint Monitoring Programme
<b>SNNPR</b>	Southern Nations, Nationalities and Peoples Region
<b>T/WASH</b>	USAID Transform WASH
<b>USD</b>	United States Dollar
<b>WASH</b>	Water, sanitation and hygiene
<b>Woreda</b>	District of Ethiopia (typically around 20,000 to 30,000 households)

# 1. Introduction

## 1.1. Background

In rural Ethiopia, less than 10 percent of the population is using improved sanitation facilities (JMP, 2023). Traditionally, households construct dry pit latrines without the assistance of artisans, using materials that are locally accessible such as mud and wood. These pit latrines do not qualify as “improved” as per the Federal Ministry of Health as the platform/slab is not built from washable materials such as concrete or plastic.

Sanitation products and services are not widely available in rural Ethiopia. A decade ago, concrete slabs were the only “improved” sanitation product commonly promoted for rural communities in Ethiopia. Transform WASH (T/WASH), a USAID-funded activity implemented in 2017 to 2024, aimed at introducing and testing new and innovative products for sanitation with a focus on rural and peri-urban areas. As a result, a diversified portfolio of products is expected to reach more people – by providing suitable solutions with the right price tag for different customer segments.

T/WASH has promoted 40 products and services that can broadly be categorized into sanitation products (with and without installation services) and hygiene products (handwashing, water treatment and menstrual hygiene). As of December 2023, more than 200,000 products have been sold in Ethiopia through the T/WASH-supported network of around 450 local businesses (= business partners).

T/WASH has carefully monitored all sales since 2017. This learning note presents all products and services promoted under T/WASH (see Table 1 and the product factsheets in the Annex) and a summary of the sales performance between 2017 and 2023.

## 1.2. Objective

The objective of this learning note is to make the comprehensive sales data collected by T/WASH available to all stakeholders to inform planning and implementation of interventions to strengthen markets for WASH products and services.

The terms “products” and “services” as applied in this study are defined in Box 1.

The learning questions were:

1. What are the main products and services promoted by T/WASH?
2. What was the sales performance and what are the sales trends?
3. What products and services should continue to be promoted?

### Box 1: Products and services

“Product” refers to a transaction between a business and a customer that includes an exchange of a product (e.g. concrete slab, SATO pan or plastic slab) without the installation of the product. Installation/construction work (if applicable) is done by the customer.

“Product and service” refers to a transaction between a business and a customer that includes the installation or construction of different products (e.g. SATO skirting or the construction of a full toilet). The payment of the customer includes the cost of the product(s) in addition to the costs of the installation/construction fee.

“Service” refers to a transaction between a business and a customer that only includes an installation/construction service. The product (e.g. a SATO pan or plastic slab) has been purchased separately by the customer.

Table 1: Overview of the 40 products and services  
(P = product, PS = product and service, \* = newly introduced)

<b>Sanitation (32)</b>	<b>Toilet user interface (20)</b>	<p><b>Concrete slabs (9)</b></p> <ul style="list-style-type: none"> <li>• Circular concrete slab with SATO pan, reinforced with iron bar (#1) <b>P*</b></li> <li>• Circular concrete slab with SATO pan, reinforced with bamboo (#2) <b>P*</b></li> <li>• Circular concrete slab with lid, reinforced with iron bar (#3) <b>P</b></li> <li>• Circular concrete slab with lid, reinforced with bamboo (#4) <b>P*</b></li> <li>• Mini concrete slab with SATO pan, reinforced with iron bar (#5) <b>P*</b></li> <li>• Mini concrete slab with SATO pan, reinforced with bamboo (#6) <b>P*</b></li> <li>• Rectangular concrete slab with lid, reinforced with iron bar (#7) <b>P</b></li> <li>• Rectangular concrete slab with SATO pan, reinforced with bamboo (#8) <b>P*</b></li> <li>• Raised foot floor upgrade with SATO (#9) <b>P*/ PS*</b></li> </ul> <p><b>Plastic products (11)</b></p> <ul style="list-style-type: none"> <li>• Plastic slab small (with or without installation) (#10A and #10B) <b>P* / PS*</b></li> <li>• Plastic slab medium (with or without installation) (#11A and #11B) <b>P* / PS*</b></li> <li>• SATO pan (without installation) (#12) <b>P*</b></li> <li>• SATO pan installation on concrete floor ("retrofit") (#13) <b>PS*</b></li> <li>• SATO pan installation on dirt floor ("skirting") (#14) <b>PS*</b></li> <li>• SATO stool (with or without installation) (#15A and #15B) <b>P* / PS*</b></li> <li>• SATO flex (with or without installation) (#16A and #16B) <b>P* / PS*</b></li> </ul>
	<b>Toilet sub-structure (4)</b>	<ul style="list-style-type: none"> <li>• Concrete rings (#17A) <b>P</b></li> <li>• Concrete ring installation (on single or twin pit) (#17B and #17C) <b>PS / PS</b></li> <li>• Toilet sub-structure (other materials) (#17D) <b>PS</b></li> </ul>
	<b>Toilet super-structure (2)</b>	<ul style="list-style-type: none"> <li>• Toilet super-structure (with HCB) (#18A) <b>PS</b></li> <li>• Toilet super-structure (with other materials) (#18B) <b>PS</b></li> </ul>
	<b>Full toilet solutions (4)</b>	<ul style="list-style-type: none"> <li>• Full toilet simple pit (#19A) <b>PS</b></li> <li>• Full toilet single offset (#19B) <b>PS</b></li> <li>• Full toilet semi offset (#19C) <b>PS</b></li> <li>• Full toilet twin offset (#19D) <b>PS</b></li> </ul>
	<b>Others (2)</b>	<ul style="list-style-type: none"> <li>• Toilet cleaning brush (#20A) <b>P</b></li> <li>• Lid (#20B) <b>P</b></li> </ul>
<b>Hygiene (8)</b>	<b>Handwashing (3)</b>	<ul style="list-style-type: none"> <li>• Handwashing facility (faucet fitted) (#21) <b>P</b></li> <li>• Handwashing facility (Happy Tap) (#22) <b>P*</b></li> <li>• Handwashing facility (no touch) (#23) <b>P*</b></li> </ul>
	<b>Household water treatment (4)</b>	<ul style="list-style-type: none"> <li>• Nazava water filter (#24) <b>P</b></li> <li>• Tulip water filter (#25) <b>P</b></li> <li>• P&amp;G purifier (#26) <b>P</b></li> <li>• Wuha Agar ("Waterguard") (#27) <b>P</b></li> </ul>
	<b>Menstrual hygiene (1)</b>	<ul style="list-style-type: none"> <li>• Reusable sanitary pad (#28) <b>P</b></li> </ul>

## 2. Design and methodology

### 2.1. Secondary data sources

#### Transform WASH sales database

Sales of products by business partners in 63 *woredas* were tracked throughout the project period from 2017 to 2023, using DHIS2 as a data management tool.<sup>1</sup> Sales in *woredas* initially supported by the USAID Growth through Nutrition (GtN) activity are also included in the database as T/WASH continued supporting business partners in these districts after the phasing out of GtN. The learning note only includes sales from businesses to customers (and not transactions between businesses along the supply chain).

In the course of T/WASH implementation, sales data has been expanded to include “products and services” and “services” (see Box 1). To avoid double counting, only “products and services” were added to the analysis of this learning note. For instance, the installation service (by a business partner) of a SATO pan previously purchased by a household, is not included. Therefore, the number of products installed by T/WASH business partners is slightly underestimated in this learning note.

#### Household installation quality surveys

Surveys were conducted by PSI in three rounds (2020, 2021 and 2022) from a random selection of customers in implementation *woredas* that were accessible at the time of the surveys. Sample size: n = 857 (2020), n = 908 (2021), n = 899 (2022). Indicators related to users' satisfaction were extracted from the surveys.

### 2.2. Primary data collection

**T/WASH field staff survey.** An online questionnaire was deployed in April 2024 to systematically collect inputs from PSI field staff (including business advisors and business development officers at the regional and *woreda* level). The survey aimed at assessing product perceptions and preferences of the team that is in frequent contact with business partners and customers. A total of 21 responses were obtained and used for the analysis.

#### Focus group discussions

In March and April 2024, a team from IRC WASH conducted focus group discussions (FGDs) with health extension workers (HEWs) and mason/installers in five *woredas* across five regions: Wondo (Oromia), Wondo Genet (Sidama), West Badwacho (South), Shashago (Central) and Gursum (Somali). A total of 39 mason/installers and HEWs participated in the FGDs to discuss their view on household preferences and satisfaction with T/WASH products and services. In addition, respondents were asked how products and services could be improved.

#### Consultation with T/WASH team

To prepare the product factsheets, regular discussions with relevant staff at PSI took place. Factsheets have been reviewed by the T/WASH leadership team.

### 2.3. Data analysis

Data from the T/WASH sales database, household installation quality survey, and T/WASH field staff survey were analysed using Microsoft Excel. Data for regions previously part of SNNPR (i.e. Sidama, South, Central and South-West) were categorized under one region “South”. Discussions during the FGDs were documented in Microsoft Word and used for the interpretation of results.

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<sup>1</sup> <https://dhis2.org>

## 3. Findings

### 3.1. WASH products and services

Since the program's inception in 2017, a total of 40 individual WASH products and services have been introduced by T/WASH (see Table 1), 20 of them in Ethiopia with specific support from T/WASH. The products and services can be categorized in various ways:

- Sanitation products (32) vs hygiene products (8)
- The sanitation products can broadly be grouped into concrete slabs (9) and plastic products (11), sub-structure (4), super-structure (2), full toilet construction (4) and others (2). Noting that the categories are not clear cut: e.g., some plastic products may be integrated with concrete slabs and some installation of plastic products may include finishing work with concrete.
- The sanitation products are grouped into "products" (18) without installation service offered by the business partner and "products and services" (14) including installation.
- Concrete slabs can be categorized according to three key attributes: form/size (rectangular, circular or mini), drop hole cover (lid or SATO pan) and re-enforcement (iron or bamboo). Not all possible combinations have been tested and promoted under T/WASH.
- The hygiene products can be grouped into handwashing facilities (3), household water treatment products (4) and menstrual hygiene (1). No installation services are required for any of the hygiene products.

For simplicity and based on the importance related to sales, some of the products and services have been grouped together in the factsheets in the Annex – resulting in a total of 28 factsheets.

### 3.2. Sales performance

#### Total sales number

From the activity's inception in 2017 to the end of 2023, the total sales by T/WASH business partners have reached 226,552. This means that approximately 1 in 100 households in Ethiopia has bought a product/service from a T/WASH business partner (possibly slightly less as some households may have purchased more than one product). On average, each of the 450 business partners has sold about 500 products from 2017 to 2023.

Despite economic and political challenges, the sales numbers of T/WASH business partners steadily increased and reached almost 70,000 in 2023 (Figure 1), although the annual sales trends of different products vary greatly as further elaborated in the following sections and presented in the factsheets.

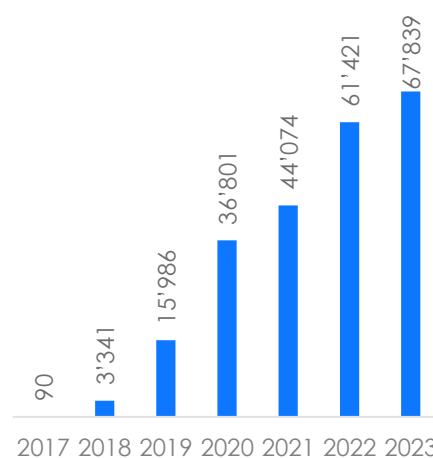


Figure 1: Total sales number by year

Sanitation products and services, with 195,605 sales, made up the majority of the sales (85 percent) while menstrual hygiene products accounted for 14,336 sales (6 percent), handwashing products for 10,989 sales (5 percent) and household water treatment products for 8,620 sales (4 percent). Of the sales related to sanitation, 64,097 were reported as a service (33 percent) with an increasing trend towards selling products combined with an installation service (Figure 2).



This is a positive development, as T/WASH experiences indicate that installation of plastic sanitation products by trained artisans is essential to ensure toilets are indeed upgraded to “improved” status (Transform WASH, 2024). The installation services include SATO retrofit, SATO skirting, installation of plastic slabs, SATO stool and SATO flex, installation of concrete rings for the substructure and the construction of superstructure and full toilet solutions.

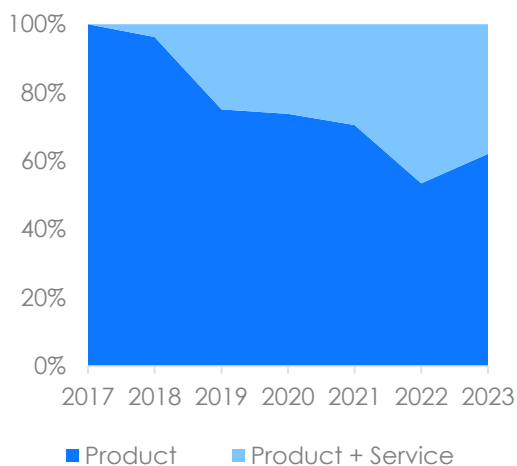


Figure 2: Percentage of sanitation products with and without installation services

To assess seasonal variations, the total figures were disaggregated by month of sales. Sales of sanitation products were consistent throughout the year, with a peak in May/June (up 16 percent) and a drop in January/February (down 26 percent), see Figure 3. This can probably be attributed to the harvesting seasons.

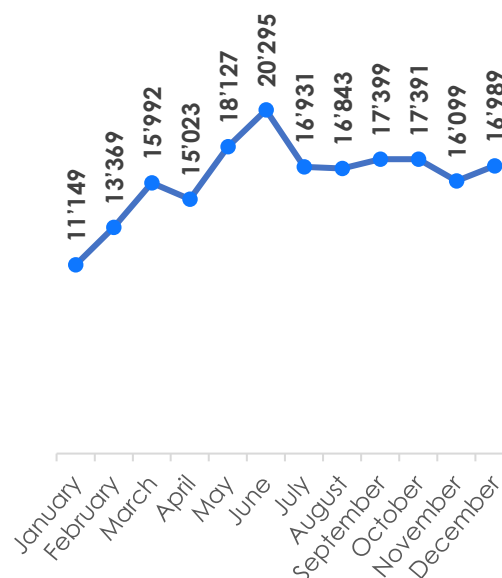


Figure 3: Total sales of sanitation products and services disaggregated by month (2017-2023)

### Sales by product type

Out of the total 40 T/WASH products and services, 12 contributed to 95 percent of the total sales while the remaining 28 collectively only accounted for 5 percent (Figure 4). Plastic sanitation products such as plastic pans and plastic slabs made up the majority of sales (174,033 or 76 percent) followed by concrete slabs (17,649 or 8 percent). Amongst the plastic products, SATO pans were the most popular with 150,560 sales (including SATO pans used for installation services and build into concrete slabs), followed by small plastic slabs with 26,610 sales.

Among handwashing products, faucet-fitted units were most popular (10,734 out of a total of 10,989 sales). For household water treatment, Wuha Agar was the most popular with 5,902 sales out of a total of 8,620. More details about the sales performance of individual products and services can be explored in the factsheets in the annex of this learning note.

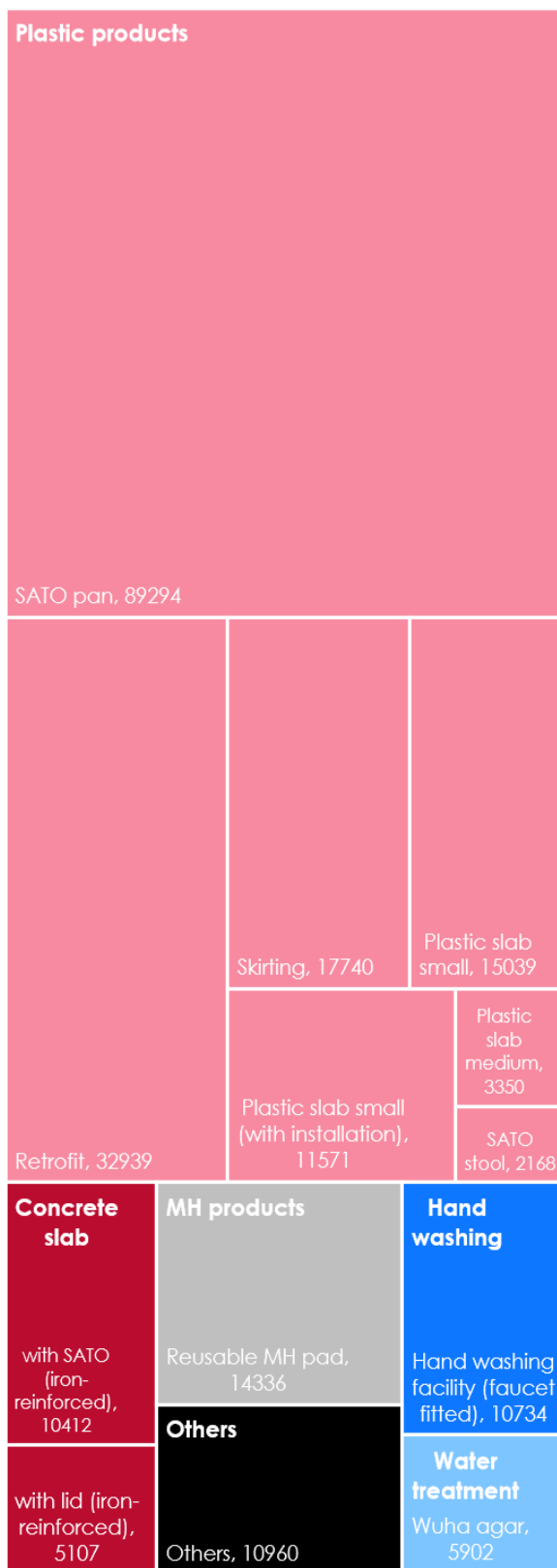


Figure 4: Sales data by product categories

## Sales by regions and woredas

In 2017, the first business partners of T/WASH were located in SNNPR<sup>2</sup>, before expanding to other regions in 2018 and 2019. Overall, most sales were achieved in Amhara, Oromia, the former SNNPR and Somali (Table 2).

Table 2: Sales data by region

	Launch	Number of woredas	Percentage of total sales
Amhara	2018	16	37%
Oromia	2018	20	25%
South <sup>2</sup>	2017	20	23%
Somali	2019	3	11%
Tigray	2019	3	2%
Benishangul-Gumuz	2018	2	< 1%
Gambella	2019	1	< 1%
Afar	2019	1	< 1%
Dire Dawa	2019	1	< 1%
<b>Total</b>		<b>67</b>	<b>100%</b>

In most regions, the sales of plastic sanitation products (and their installation) dominated. Exceptions were Dire Dawa where concrete slabs were most popular (likely due to its mainly urban setting) and Tigray where handwashing products were most popular (likely due to the short implementation phase during the COVID pandemic before sales activities were interrupted by the war). Also, sales patterns in Somali region were found to be different from those in the highlands, with high sales numbers for menstrual hygiene products and full toilet constructions.

<sup>2</sup> Southern Nations, Nationalities and Peoples Region which is now divided into four new regions: Central Ethiopia, South West Ethiopia, South Ethiopia and Sidama. All grouped as "South" in the learning note.

On average, in each *woreda* 3,381 products/services were sold (i.e. reaching about 10 to 20 percent of the households within the 67 *woredas* supported by T/WASH). However, there was a big variation between *woredas*. In Dessie Zuriya (Amhara region), a total of 16,395 sales were conducted while in 12 *woredas* less than 500 sales were completed (Figure 5). Strong local government support and active businesses were essential to reach high sales performance at the local level.

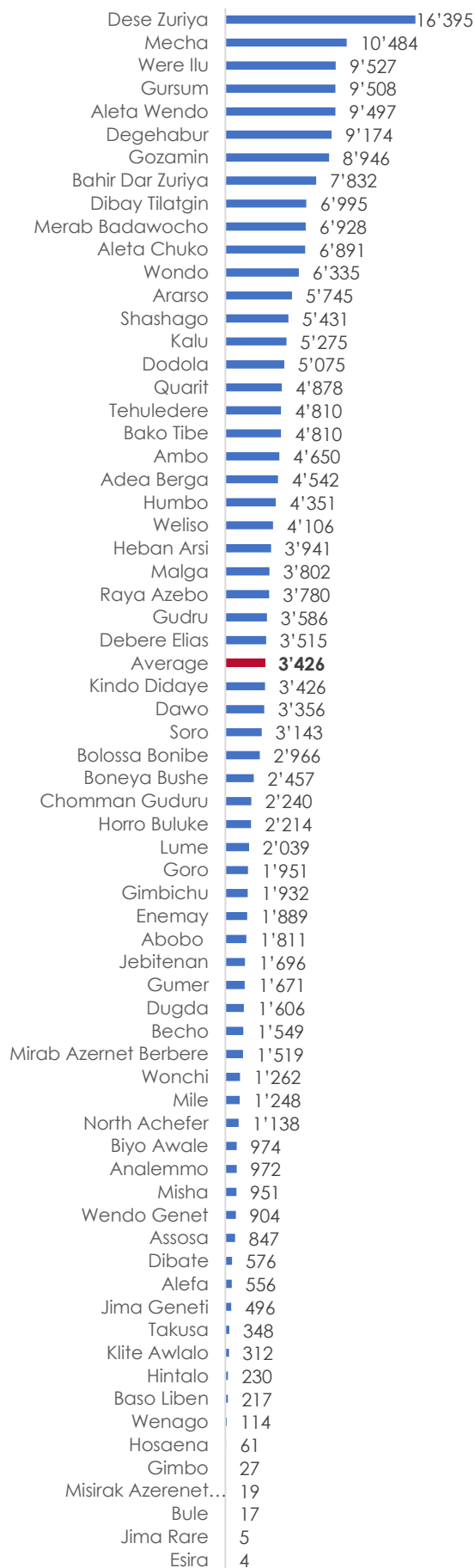


Figure 5: Sales data by *woreda*

### 3.3. Design and innovations

One of the objectives of the T/WASH activity was to introduce new WASH products and services to the Ethiopian market. Half of the 40 products/services were introduced between 2017 to 2023 with specific support from T/WASH (see Table 1). The other half were available in Ethiopia prior to 2017, or introduced after 2017 but independently by other actors. Table 3 shows the roll-out of product and service sales by T/WASH business partners.

Table 3: First reporting of product and service sales by T/WASH business partners

Product introduction	
2017	<ul style="list-style-type: none"> <li>• Circular concrete slab with lid (iron-reinforced)</li> </ul>
2018	<ul style="list-style-type: none"> <li>• SATO pan</li> <li>• SATO installation on concrete floor (retrofit)</li> <li>• Circular concrete slab with SATO (iron-reinforced)</li> <li>• Rectangular concrete slab with lid (iron-reinforced)</li> <li>• Plastic slab medium</li> <li>• Lid</li> </ul>
2019	<ul style="list-style-type: none"> <li>• Wuha Agar</li> <li>• SATO installation on dirt floor (skirting)</li> <li>• Toilet cleaning brush</li> <li>• P&amp;G</li> <li>• SATO stool</li> <li>• Mini concrete slab with SATO (iron-reinforced)</li> <li>• Nazava water filter</li> <li>• Plastic slab small</li> <li>• Tulip filter</li> </ul>
2020	<ul style="list-style-type: none"> <li>• Reusable MH pad</li> <li>• Plastic slab small (with installation)</li> <li>• Plastic slab medium (with installation)</li> <li>• Circular concrete slab with lid (bamboo-reinforced)</li> <li>• Rectangular concrete slab with SATO (bamboo-reinforced)</li> <li>• Concrete rings</li> <li>• Concrete ring installation (twin pit)</li> </ul>
2021	<ul style="list-style-type: none"> <li>• Toilet superstructure (with HCB)</li> <li>• Raised foot floor upgrade with SATO</li> <li>• Toilet sub-structure (other materials)</li> <li>• Circular concrete slab with SATO (bamboo-reinforced)</li> <li>• Full toilet semi offset</li> <li>• Handwashing facility (Happy Tap)</li> <li>• Mini concrete slab with SATO (bamboo-reinforced)</li> <li>• SATO flex</li> </ul>
2022	<ul style="list-style-type: none"> <li>• SATO flex with installation</li> </ul>

### Concrete slabs

In 2017, T/WASH business partners started manufacturing circular concrete slabs with lid (iron-reinforced) – a product that has been promoted by other actors, also prior to 2017. In 2018, the SATO pan was introduced and over the years successfully replaced concrete lids as the preferred choice for covering/sealing the drop hole of pit latrines (Figure 6).

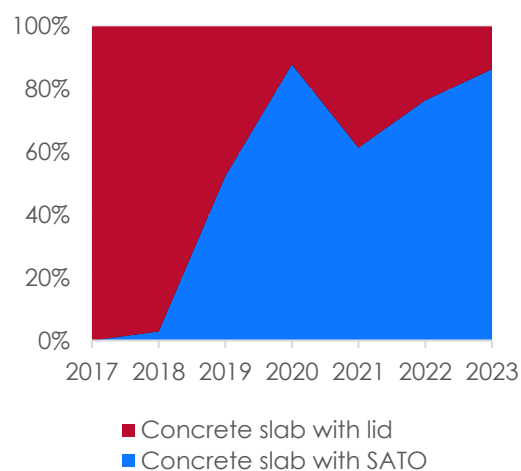


Figure 6: Percentage of sold concrete slabs by type of drop hole cover/seal

The T/WASH team also tested different forms and sizes of concrete slabs (rectangular, mini slabs) and low-cost reinforcement (bamboo instead of iron). However, these innovations were less successful and did not convince business partners and customers: the circular concrete slab remained the preferred and most sold option (Figure 7).

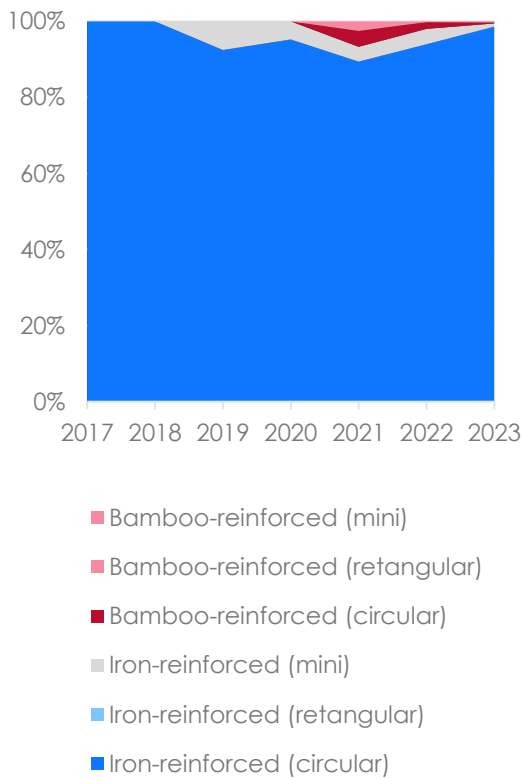


Figure 7: Percentage of sold concrete slabs by form/size and type of reinforcement

### Latrine floor solutions

Concrete slabs are relatively expensive and hardly affordable for many rural households in Ethiopia. Therefore, a strong focus of T/WASH was on exploring alternative options to concrete slabs to properly separate feces from human contact. The objective was to build pit latrines that qualify as “improved” at the lowest cost possible.

The diversification was successful, with concrete slabs taking a relatively small share of the total sales starting from 2019 (Figure 8). SATO pan installation options, such as “retrofitting” and “skirting”, and plastic slabs reached and sustained a significant share of all sales. Sales of SATO pans without installation services evolved to be the main option. This will need some critical reflection/review in the future, as there is a risk of faulty installation of SATO pans if it is not done by a trained artisan and may in such cases still not be counted as an “improved” toilet facility (Transform WASH, 2018).

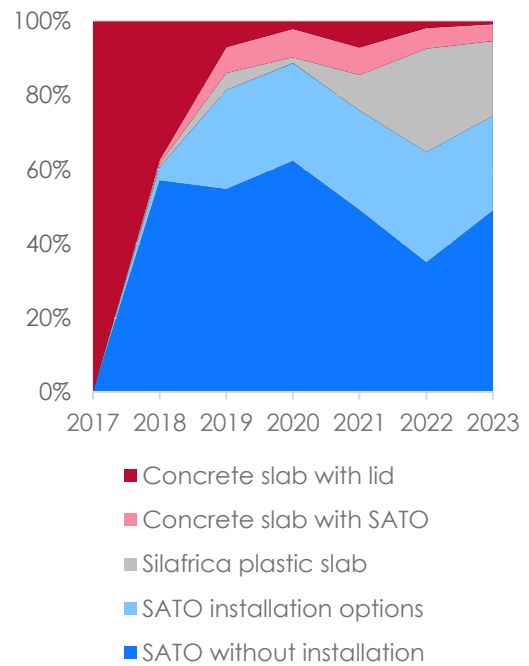


Figure 8: Percentage of slab installation options

### Plastic slabs

The initial assumption of the T/WASH team was that medium-sized plastic slabs would be the most desirable product in this category. However, after introducing the slabs to the market, the small-sized slabs proved to be more popular with customers and business partners – mainly due to the lower price as indicated by HEWs and business partners in the FGDs. The small-sized plastic slabs achieved more sales than the medium-sized ones from 2021 onwards (Figure 9).

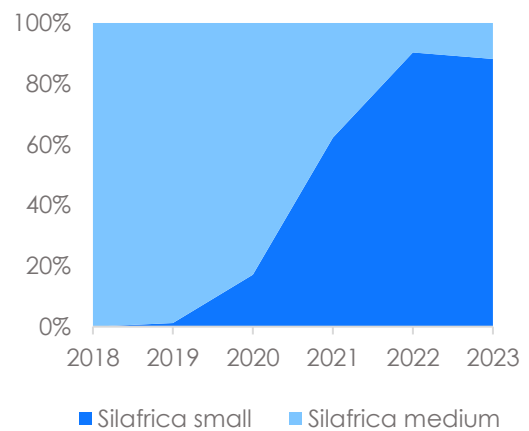


Figure 9: Percentage of small-sized and medium-sized Silafrica plastic slabs sold

## Toilet construction services

In urban areas of Ethiopia, the construction of full toilet solutions has been promoted by several organizations – often combined with loans from micro-finance institutions. However, T/WASH found that such services are less popular in rural areas – whenever possible households seemed to prefer putting in their own labor (e.g. for digging a pit or building the superstructure) rather than paying a trained artisan to do this work.

While contributing to only about one percent of the total sales, a continuous increase in sales for full toilet solutions, including toilet sub- and superstructures could be observed from 2020 onwards (Figure 10). This increase can mainly be attributed to the Somali region, where 82 percent of these sales took place. Recognizing different customer priorities in Somali region, a user-centered toilet design workshop took place in September 2021 which is assumed to have contributed to the increased sales of full toilet solutions in the region. The design considerations (e.g. elevated footrests to prevent urine splashback and improved privacy) outweigh the higher costs.

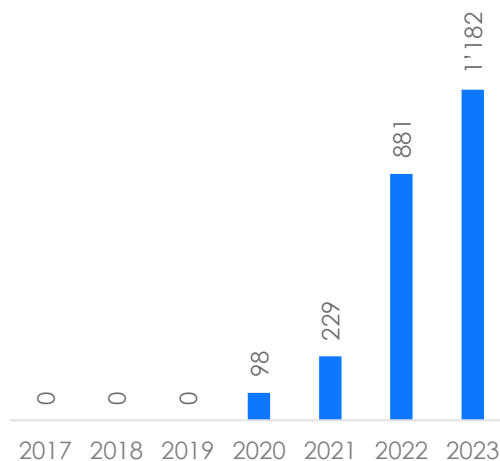


Figure 10: Sales of full toilet, sub- or superstructure between 2017 to 2023

## Hygiene products

Water treatment solutions were introduced in late 2019, followed by the introduction of handwashing products in 2020 amidst the COVID-19 pandemic. Additionally, menstrual hygiene products were introduced in mid-2020 with a peak in promotion in mid-2021. With increased promotion the percentage of sales for these products increased, but none of them managed to sustain and expand sales over time (Figure 11).

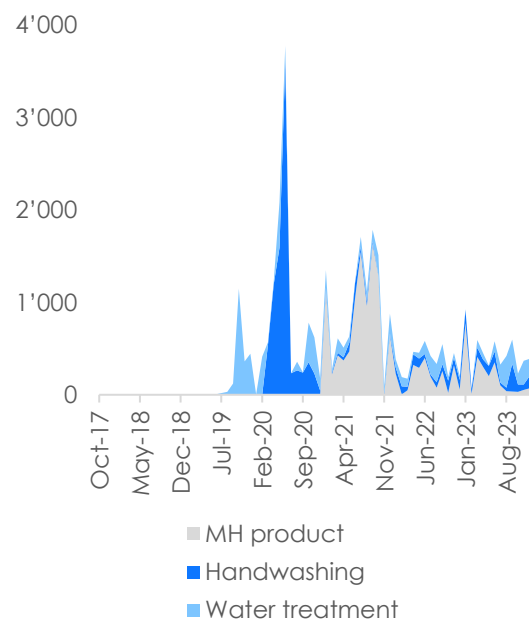


Figure 11: Monthly sales of hygiene products

### 3.4. Product/service preferences

#### Preferences of program field staff

T/WASH field staff were asked about their perceptions of household and business partner preferences for products and services: from a list of all 40 products they were asked to select 15 to continue selling (“top”) and 15 for which sales should be discontinued (“flop”), see Figure 12.

Overall, plastic sanitation products were rated to be most desirable, including SATO retrofit, SATO stool and plastic slabs, with a slight preference for including installation services rather than selling the products without installation.

Still, most of the field staff included some hygiene products in their selection, indicating that these are valuable additions to the overall offering. For hygiene products, Happy Tap was selected as the most preferable handwashing product (followed by faucet-fitted facility and no-touch facility), and Tulip water filter was the most preferred water treatment product (followed by Wuha Agar, Nazava water filter and P&G).

Concrete slabs, in particular the ones with bamboo-reinforcement, and lids to cover the drop hole were generally seen as products that could be discontinued.

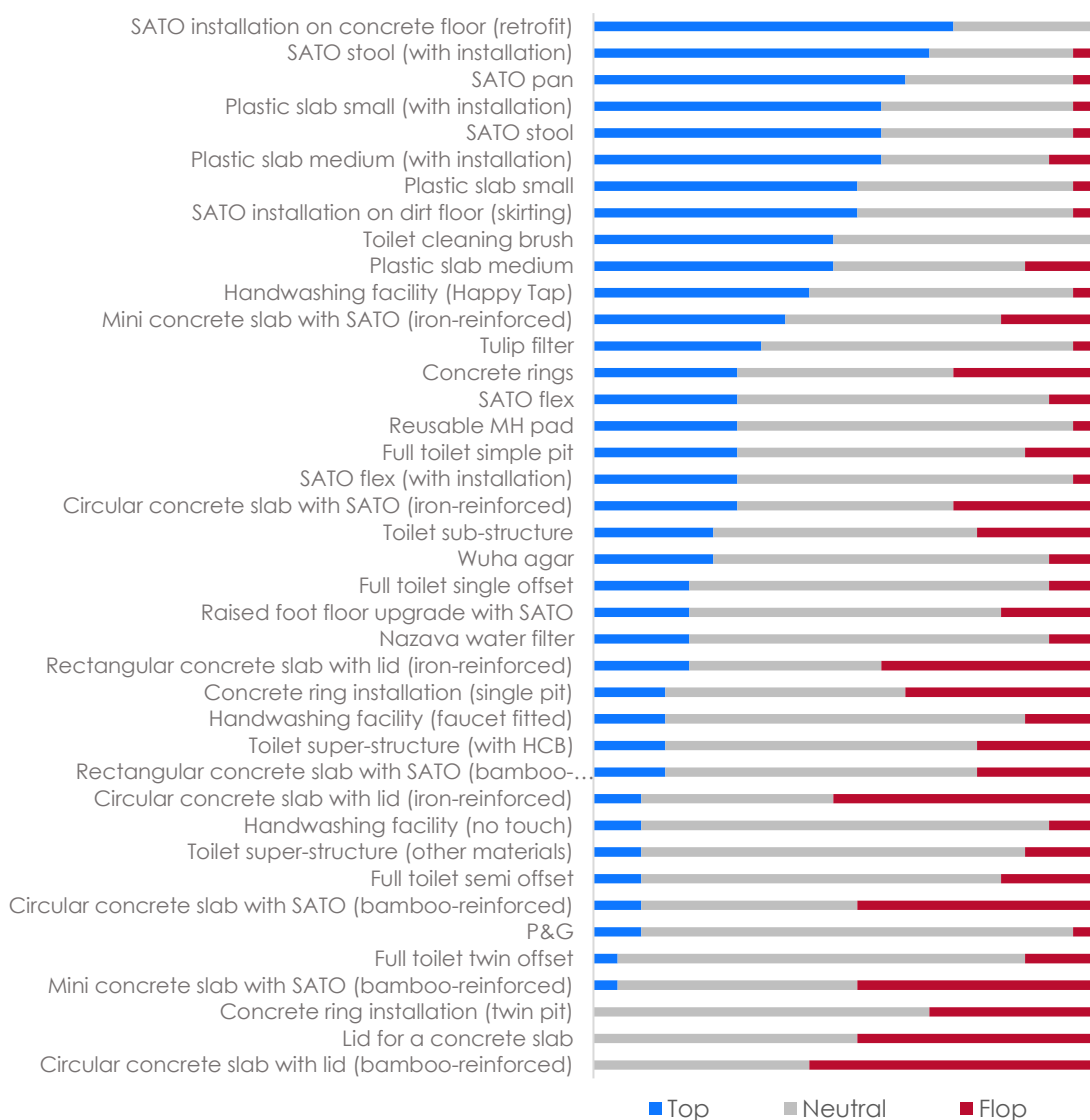


Figure 12: Offerings selected by T/WASH field staff to continue being offered (“top”) or to discontinue (“flop”)

## Preferences of HEWs and business partners

Inputs provided by HEWs and business partners who participated in the FGDs confirmed the perception of T/WASH field staff: the SATO pan was the top choice, followed by skirting, retrofitting and small-sized plastic slabs.

All actors mentioned that the price of the product/service is a factor for customers. Durability and ease of transport were mentioned by about half of the respondents to be deciding factor.

## Availability in different woredas

In this analysis, widespread availability of products and services is seen as an indicator of high demand by all actors. Figure 13 shows the number of woredas in which at least 10 sales were completed.

SATO pan, retrofitting and skirting are the most widely available options confirming their high popularity. Plastic slabs and SATO stool are also widely available.

Half of the products/services were only sold in five woredas or less. This raises questions about how future interventions can strengthen the spread of products to more woredas which in itself would increase the sales numbers and impact.

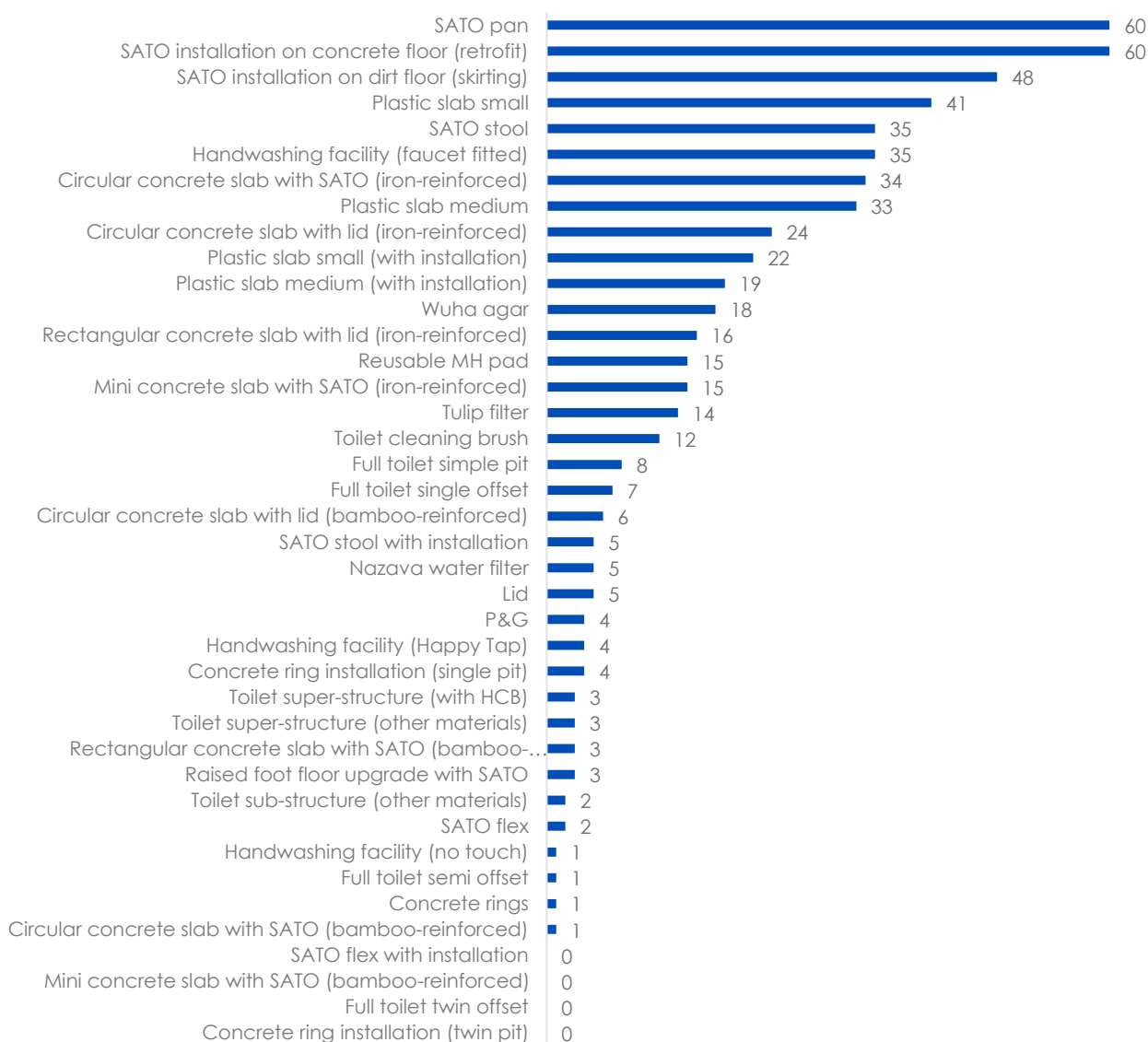


Figure 13: Number of woredas with at least 10 sales from each product and service



## Preference for latrine floor options

The sales data show a notable transition from concrete slabs to alternative options. Findings from the FGDs confirm this shift and indicate that the cost of slab/platform construction plays an important role in the customer's decision on which option to install.

T/WASH field staff members were asked to rank the latrine floor solutions based on their suitability in the local context. The results indicate that SATO retrofitting is perceived as the most suitable option in most contexts, followed by SATO skirting, plastic slabs, concrete slabs with SATO, plastic slabs with lid and lastly raised foot floor upgrade with SATO (Figure 14). About 80 percent of the field staff selected the plastic products as the first three choices, indicating a clear preference over concrete slabs.

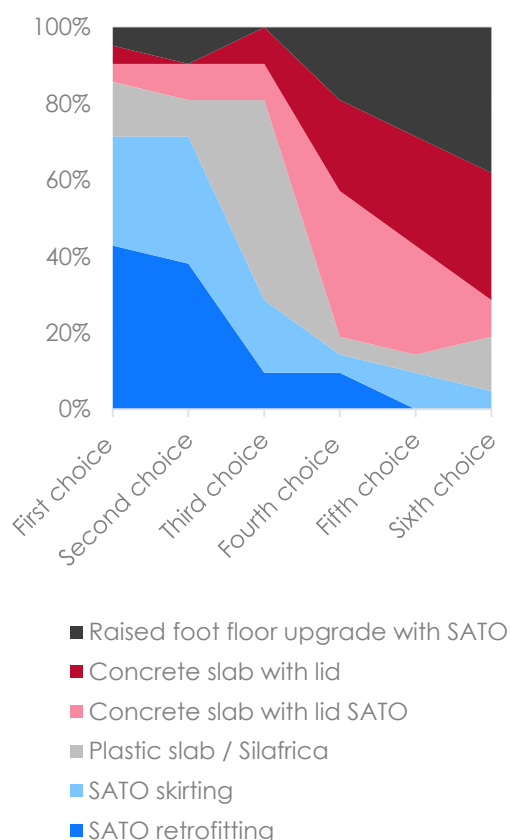


Figure 14: Ranking of the suitability of latrine floor solutions by T/WASH field staff

## Preference for concrete slabs

Sales data suggest that the circular iron-reinforced slab with SATO pan is the preferred option from the concrete slabs. Feedback from T/WASH field staff confirmed this: 76 percent reported that iron-reinforcement is more suitable, while only 10 percent believe that bamboo-reinforcement is more suitable (and 14 percent has no preference).

SATO pans are seen as the most suitable drop hole cover by 80 percent of T/WASH field staff, mainly because of the low cost and the automatic closing after usage. Still, 10 percent thought that plastic slabs were more suitable, and 10 percent preferred concrete lids over the other options.

While circular slabs are clearly the best-selling product among the concrete slabs, only 29 percent of T/WASH field staff believed that these are most suitable. 33 percent believed that mini slabs are more suitable, 24 percent indicated rectangular slabs to be their preferred choice, and 14 percent showed no preference.

## 4. Lessons Learned and Recommendations

**Plastic pans and plastic slabs have been the most successful products under T/WASH: they are low-cost and easy to transport while making a real change to the quality of a household latrine.**

174,033 (76%) out of 229,552 products sold were plastic pans and plastic slabs. The SATO pan at an indicative price of 450 Birr (8 USD) was the most popular product followed by small-sized plastic slabs manufactured by Silafrica at a price of 650 Birr (12 USD).

**Sanitation products need to be properly installed: business models including installation services for plastic products were found to be scalable.** “Retrofitting” and “skirting” were both found to be high in demand –the advantage being that the SATO pan is installed by a trained mason, while the cost to the customer is relatively low. The cost of the installation service is lower than the construction of concrete slabs. Particularly SATO skirting is a low-cost option which can easily upgrade a traditional latrine to “improved” status.

**The price of products and services significantly impact a household’s technology preference.** For most rural households, affordability is the main challenge. Products and installation services need to be low-cost and designed to raise a latrine to “improved” status (e.g. SATO skirting and retrofitting, or installation of small-sized plastic slabs) – even if these latrines need to be rehabilitated again after a few years. The construction of more permanent toilets seems currently to be out of reach due to limited affordability. In addition, durability and ease of transport also contribute to product preference by households.

**Consumer preferences drive sales: understanding the consumer preferences and behaviours are crucial for the success of WASH products and services.** Sales data and feedback from stakeholders highlight the importance of aligning products with the needs and preferences of target communities - such as e.g. raised footrest retrofitting in the Somali region.

**Not all innovations are successful, however, this should not stop implementers from testing new products and services.** Many of the 40 products and services offered by T/WASH business partners did not manage to reach high sales numbers and geographic coverage. Nevertheless, a wide range of products and services allows households to choose the technology that best fits their local context - and some of the innovations will eventually reach scale.

### Key recommendations:

- 1) For plastic sanitation products further refine business models designed around installation services by trained masons.
- 2) Prices of products and services significantly impact households’ willingness to invest: continue testing low-cost options to upgrade traditional latrines to “improved” status.
- 3) Encourage innovation in product design and services to meet household technology preferences. Design new, innovative solutions with strong participation from end users.

## References

JMP, 2023. *Progress on household drinking water, sanitation and hygiene 2000–2022: special focus on gender*. New York: United Nations Children's Fund (UNICEF) and World Health Organization (WHO), 2023. [Link](#)

Transform WASH, 2018. Kebede A. and Narracott A. *Assessment of Field Performance and Acceptance of the SATO Pan in Ethiopia*. Addis Ababa: USAID Transform WASH, 2018. [Link](#)

Transform WASH, 2024. Mebrate E., Osterwalder L. and Mussa M. *Door-to-Door Sales of Toilet Installation Services – Lessons from Ethiopia*. Addis Ababa: USAID Transform WASH, 2024. [Link](#)

## Annex: Product factsheets

### Overview of factsheets:

- #1 Circular concrete slab with SATO (iron-reinforced)
- #2 Circular concrete slab with SATO (bamboo-reinforced)
- #3 Circular concrete slab with lid (iron-reinforced)
- #4 Circular concrete slab with lid (bamboo-reinforced)
- #5 Mini concrete slab with lid (iron-reinforced)
- #6 Mini concrete slab with lid (bamboo-reinforced)
- #7 Rectangular concrete slab with lid (iron-reinforced)
- #8 Rectangular concrete slab with SATO (bamboo-reinforced)
- #9 Raised foot floor upgrade with SATO
- #10 Plastic slab small (with and without installation)
- #11 Plastic slab medium (with and without installation)
- #12 SATO pan
- #13 SATO pan installation on concrete floor ("retrofit")
- #14 SATO pan installation on dirt floor ("skirting")
- #15 SATO stool (with and without installation)
- #16 SATO flex (with and without installation)
- #17 Toilet sub-structure
- #18 Toilet super-structure
- #19 Full toilet solutions
- #20 Other sanitation-related products
- #21 Handwashing facility (faucet fitted)
- #22 Handwashing facility (Happy Tap)
- #23 Handwashing facility (no touch)
- #24 Nazava water filter
- #25 Tulip water filter
- #26 P&G Purifier of Water
- #27 Wuha Agar
- #28 Reusable sanitary pads

## Circular concrete slab with SATO (iron-reinforced)

Circular concrete slab reinforced with iron bar fitted with a SATO pan. Slab can be placed on top of an existing pit.



### Characteristics

**Price:** 2,600 ETB (≈ 47 USD)  
(2023 average for household purchase)

**Weight:** 140 kg

**Dimensions:** 1.2 m diameter with 5 cm thickness

**Manufacturer:** locally manufactured by small businesses, SATO pan from Lixil Corporation

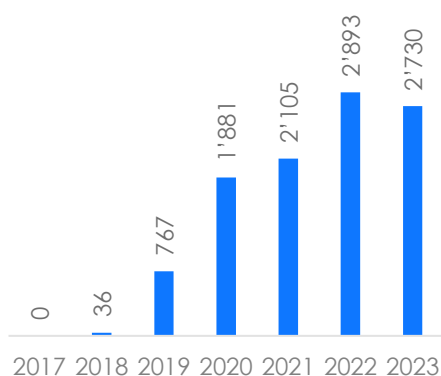
### Strengths and Limitations

- + Durable
- + Fully covers a pit
- + Easy to install
- + Movable when pit is full
- + Seal/lid closes automatically
- Heavy to transport
- Requires some water to flush
- Relatively expensive

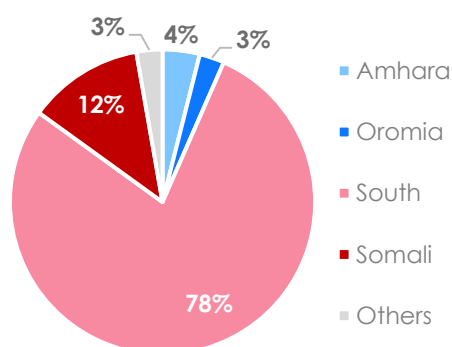
### Sales

- Total sales between 2017-2023: 10,412 (5 percent of total sales)
- Sold in 34 out of 63 woredas (only counted if more than 10 sales in a woreda)

Sales by years



Sales by regions



### Review and recommendations

Continue to promote



- #7 product sales out of 28 factsheets
- T/WASH field staff product/service rating:
  - 29 percent a "top product"
  - 29 percent a "flop product"
- Households preferred latrine floor option

## Circular concrete slab with SATO (bamboo-reinforced)

Circular concrete slab reinforced with bamboo fitted with a SATO pan. Slab can be placed on top of an existing pit.



### Characteristics

**Price:** 1,200 ETB (≈ 22 USD)  
(2023 average for household purchase)

**Weight:** 140 kg

**Dimensions:** 1.2 m diameter with 5 cm thickness

**Manufacturer:** locally manufactured by small businesses, SATO pan from Lixil Corporation

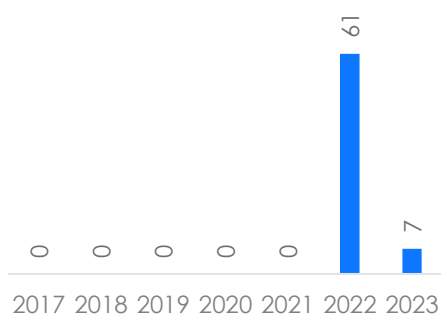
### Strengths and Limitations

- + Durable (but less than iron reinforced slabs)
- + Fully covers a pit - easy to install
- + Movable when pit is full
- + Less expensive than iron reinforced slabs
- + Seal/lid closes automatically
- Heavy to transport
- Requires some water to flush

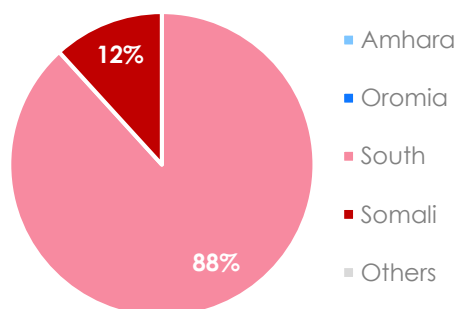
### Sales

- Total sales between 2017-2023: 68 (less than 1 percent of total sales)
- 1 out of 63 woredas (only counted if more than 10 sales in a woreda)

Sales by years



Sales by regions



### Review and recommendations

**Not promising**

- #26 product sales out of 28 factsheets
- T/WASH field staff product/service rating:
  - 10 percent a "top product"
  - 48 percent a "flop product"
- Bamboo-reinforcement could not convince customers

## Circular concrete slab with lid (iron-reinforced)

Circular concrete slab reinforced with iron bar and a removable drop hole cover made of concrete. Slab can be placed on top of an existing pit.



### Characteristics

**Price:** 1,500 ETB (≈ 28 USD)  
(2023 average for household purchase)

**Weight:** 140 kg

**Dimensions:** 1.2 m diameter with 5 cm thickness

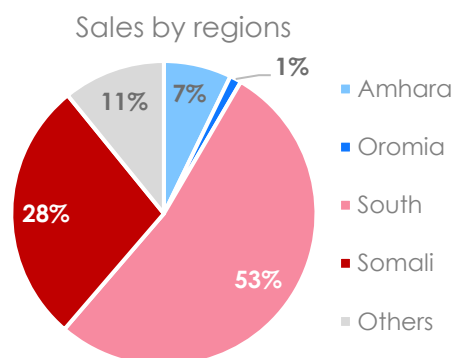
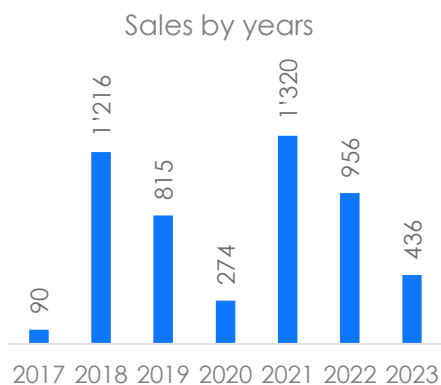
**Manufacturer:** locally manufactured by SMEs

### Strengths and Limitations

- + Durable
- + Fully covers a pit - easy to install
- + Movable when pit is full
- + Does not require water to flush
- Heavy to transport
- Lid does not close automatically
- Relatively expensive

### Sales

- Total sales between 2017-2023: 5,107 (2 percent of total sales)
- Sold in 24 out of 63 woredas (only counted if more than 10 sales in a woreda)



### Review and recommendations

**Not promising**

- #9 product sales out of 28 factsheets
- T/WASH field staff product/service rating:
  - 10 percent a "top product"
  - 52 percent a "flop product"
- Removable drop hole covers are not desirable

## Circular concrete slab with lid (bamboo-reinforced)

Circular concrete slab reinforced with bamboo and a removable lid cover made of concrete. Slab can be placed on top of an existing pit.



### Characteristics

**Price:** 750 ETB (≈ 14 USD)

(2023 average for household purchase)

**Weight:** 140 kg

**Dimensions:** 1.2 diameter with 5 cm thickness

**Manufacturer:** locally manufactured by small businesses

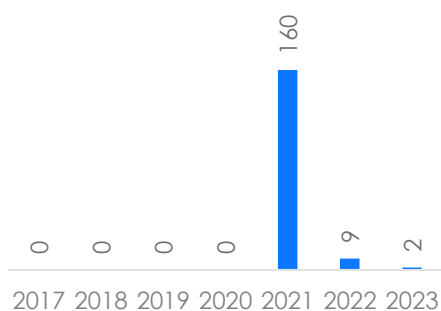
### Strengths and Limitations

- + Durable (but less than iron reinforced slabs)
- + Fully covers a pit - easy to install
- + Movable when pit is full
- + Less expensive than iron reinforced slabs
- + Does not require water to flush
- Heavy to transport
- Lid does not close automatically

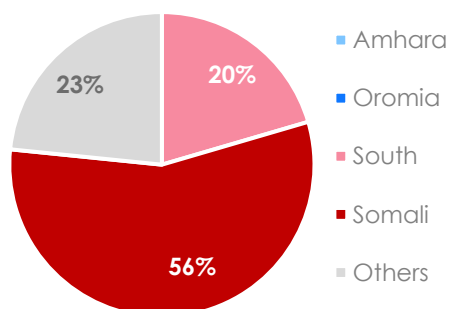
### Sales

- Total sales between 2017-2023: 171 (less than 1 percent of total sales)
- Sold in 6 out of 63 woredas (only counted if more than 10 sales in a woreda)

Sales by years



Sales by regions



### Review and recommendations

**Not promising**

- #22 product sales out of 28 factsheets
- T/WASH field staff product/service rating:
  - 0 percent a "top product"
  - 57 percent a "flop product"
- Both lid as well as bamboo are not preferred choices



## Mini concrete slab with SATO (iron-reinforced)

Rectangular small concrete slab reinforced with iron bar fitted with a SATO pan. Mini concrete slab can be installed on a new or existing solid wooden platform.



### Characteristics

**Price:** 1,200 ETB (≈ 221 USD)

(2023 average for household purchase)

**Weight:** 60 kg

**Dimensions:** 60 cm x 80 cm x 5 cm

**Manufacturer:** locally manufactured by small businesses, SATO pan from Lixil Corporation

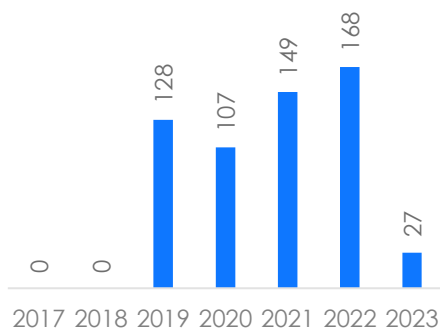
### Strengths and Limitations

- + Movable when pit is full
- + Less expensive than large-sized slabs
- + Seal/lid closes automatically
- Heavy to transport (but less than large-sized slabs)
- Requires some water to flush
- Ideally sold combined with installation service

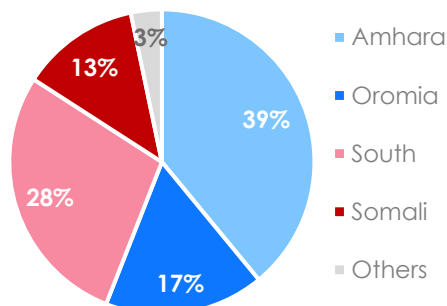
### Sales

- Total sales between 2017-2023: 579 (less than 1 percent of total sales)
- Sold in 15 out of 63 woredas (only counted if more than 10 sales in a woreda)

Sales by years



Sales by regions



### Review and recommendations

Continue to promote



- # 16 product sales out of 28 factsheets
- T/WASH field staff product/service rating:
  - 38 percent a "top product"
  - 19 percent a "flop product"
- Likely to be a suitable products in certain contexts

## Mini concrete slab with SATO (bamboo-reinforced)

Rectangular small concrete slab reinforced with bamboo fitted with a SATO pan. Mini concrete slab can be installed on a new or existing solid wooden platform.



### Characteristics

**Price:** 750 ETB (≈ 14 USD)

(2023 average for household purchase)

**Weight:** 60 kg

**Dimensions:** 60 cm x 80 cm x 5 cm

**Manufacturer:** locally manufactured by small businesses, SATO pan from Lixil Corporation

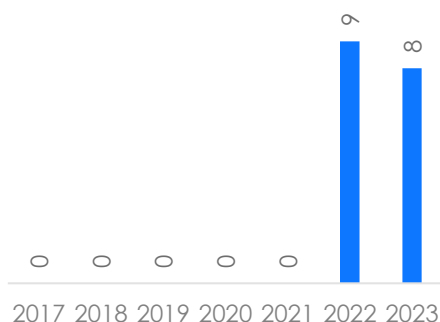
### Strengths and Limitations

- + Movable when pit is full
- + Less expensive than iron reinforced slabs
- + Seal/lid closes automatically
- Heavy to transport (but less than large-sized slabs)
- Requires some water to flush
- Ideally sold combined with installation service

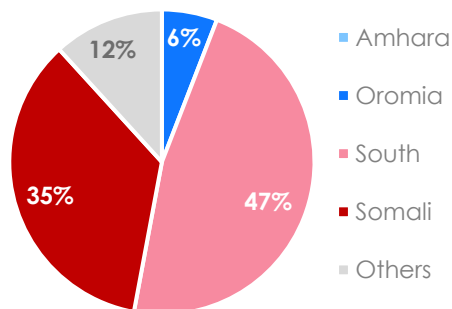
### Sales

- Total sales between 2017-2023: 17 (less than 1 percent of total sales)
- Sold in 0 out of 63 woredas (only counted if more than 10 sales in a woreda)

Sales by years



Sales by regions



### Review and recommendations

**Not promising**

- #28 product sales out of 28 factsheets
- T/WASH field staff product/service rating:
  - 5 percent a "top product"
  - 48 percent a "flop product"
- Least sold product by T/WASH business partners

## Rectangular concrete slab with lid (iron-reinforced)

Rectangular concrete slab reinforced with iron bar and a removable drop hole cover made of concrete. Slab can be placed on top of an existing pit.



### Characteristics

**Price:** 1,500 ETB (≈ 28 USD)  
(2023 average for household purchase)

**Weight:** 180 kg

**Dimensions:** 1.1 m x 1.2 m x 5 cm

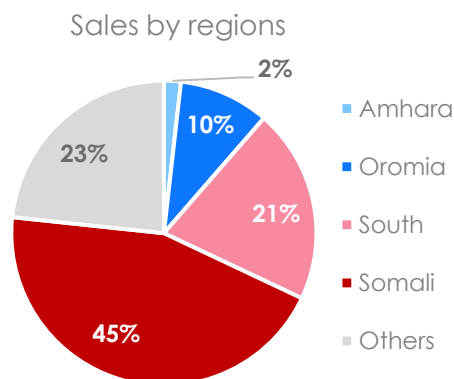
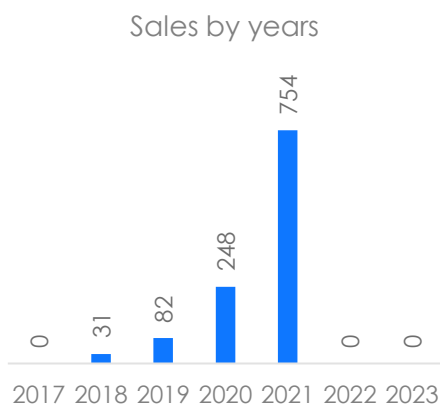
**Manufacturer:** locally manufactured by small businesses

### Strengths and Limitations

- + Durable
- + Fully covers a pit - easy to install
- + Movable when pit is full
- + Does not require water to flush
- Heavy to transport
- Lid does not close automatically
- Relatively expensive

### Sales

- Total sales between 2017-2023: 1,115 (less than 1 percent of total sales)
- Sold in 16 out of 63 woredas (only counted if more than 10 sales in a woreda)



### Review and recommendations

**Not promising**

- #15 product sales out of 28 factsheets
- T/WASH field staff product/service rating
  - 19 percent a "top product"
  - 43 percent a "flop product"
- Removable drop hole covers are not desirable

## Rectangular concrete slab with SATO (bamboo-reinforced)

Rectangular concrete slab reinforced with bamboo and a removable drop hole cover made of concrete. Slab can be placed on top of an existing pit.



### Characteristics

**Price:** 750 ETB (≈ 14 USD)

(2023 average for household purchase)

**Weight:** 180 kg

**Dimensions:** 1.1 m x 1.2 m x 5 cm

**Manufacturer:** locally manufactured by small businesses

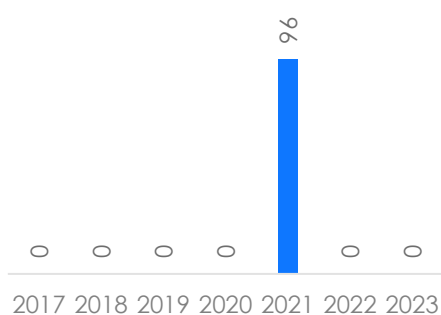
### Strengths and Limitations

- + Durable (but less than iron reinforced slabs)
- + Fully covers a pit - easy to install
- + Movable when pit is full
- + Less expensive than iron reinforced slabs
- + Seal/lid closes automatically
- Heavy to transport
- Requires some water to flush

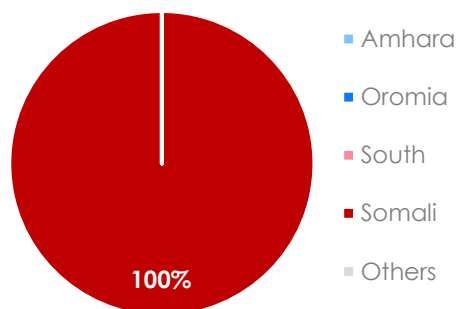
### Sales

- Total sales between 2017-2023: 96 (less than 1 percent of total sales)
- Sold in 3 out of 63 woredas (only counted if more than 10 sales in a woreda)

Sales by years



Sales by regions



### Review and recommendations

**Not promising**

- #23 product sales out of 28 factsheets
- T/WASH field staff product/service rating:
  - 14 percent a “top product”
  - 24 percent a “flop product”
- Removable lid and bamboo are not preferred choices

## Raised foot floor upgrade with SATO

Latrine floor with concrete fitted with SATO pan for the hole. It has raised footrests to prevent urine splashing the user. Designed to ensure liquid flows to the drop hole.



### Characteristics

**Price:** variable

(2023 average for household purchase)

**Dimensions:** variable

**Manufacturer:** installation by local masons, SATO pan from Lixil Corporation

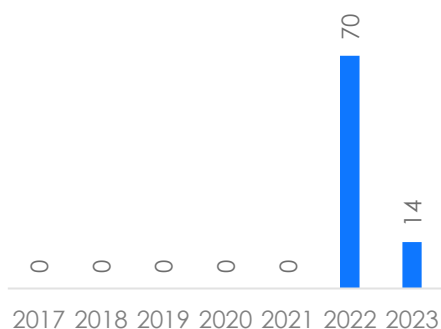
### Strengths and Limitations

- + Construction on the spot: ease of transportation
- + Seal/lid closes automatically
- + Low cost
- + Includes installation service
- Requires some water to flush
- Not movable when pit is full

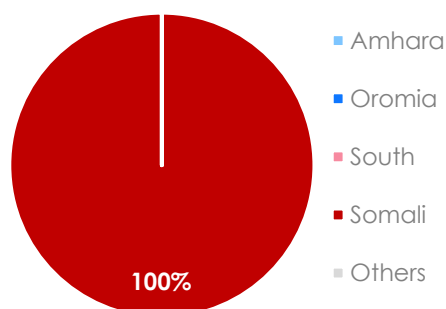
### Sales

- Total sales between 2017-2023: 84 (less than 1 percent of total sales)
- Sold in 3 out of 63 woredas (only counted if more than 10 sales in a woreda)

Sales by years



Sales by regions



### Review and recommendations

Continue to explore.



- #25 product sales out of 28 factsheets
- T/WASH field staff product/service rating:
  - 19 percent a "top product"
  - 19 percent a "flop product"
- Continue to explore this option in Somali region

## Plastic slab small

A small-sized durable and washable plastic slab. It can be fixed using screws, nails or ties on both newly constructed and existing latrines with platforms made of any material. Includes movable lid attached to a swivel hinge so users can move lid with their feet.



### Characteristics

**Price:** 650 ETB (≈ 12 USD), installation services for 250 Birr (≈ 5 USD)

(2023 average for household purchase)

**Weight:** 2 kg

**Dimensions:** 61 cm × 61 cm

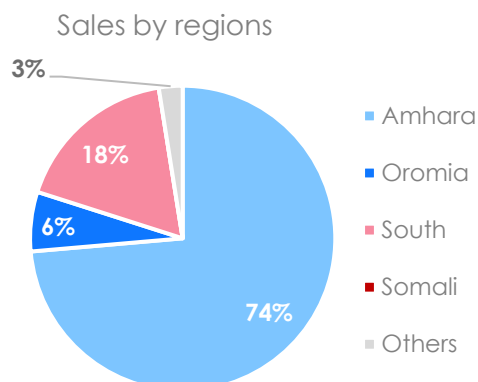
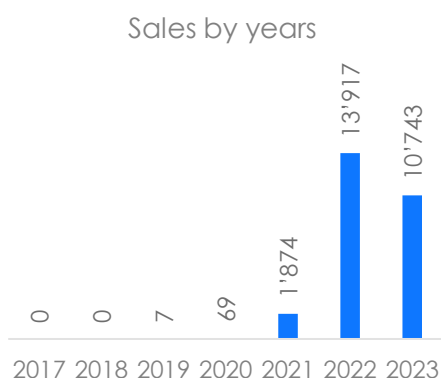
**Manufacturer:** originally imported from Kenya (Silafrica), since 2020 manufactured in Ethiopia

### Strengths and Limitations

- + Light weight for ease of transportation
- + Movable when pit is full
- + Does not require water to flush
- + Lower cost than medium-sized plastic slab
- Lid does not close automatically

### Sales

- Total sales between 2017-2023: 26,610 (12 percent of total sales); 11,571 with installation and 15,039 without installation
- Sold in 41 out of 63 woredas (only counted if more than 10 sales in a woreda)



### Review and recommendations

Continue to promote



- #3 product sales out of 28 factsheets
- Ideally sold combined with installation service
- T/WASH field staff product/service rating:

Product	Top product	Flop product
Without installation	52 %	5 %
With installation	57 %	5 %

## Plastic slab medium

A medium-sized durable and washable plastic slab. It can be fixed using screws, nails or ties on both newly constructed and existing latrines with platforms made out of any material. Movable lid attached that can be moved with foot & swivel hinge.



### Characteristics

**Price:** 750 ETB (≈ 14 USD), Installation services for 250 Birr / 5 USD

(2023 average for household purchase)

**Weight:** 3 kg

**Dimensions:** 80 cm × 80 cm

**Manufacturer:** originally imported from Kenya (SilAfrica), since 2020 manufactured in Ethiopia.

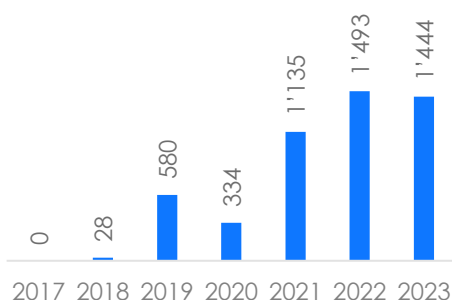
### Strengths and Limitations

- + Light weight for ease of transportation
- + Movable when pit is full
- + Does not require water to flush
- Lid does not close automatically
- Higher cost than small-sized plastic slab

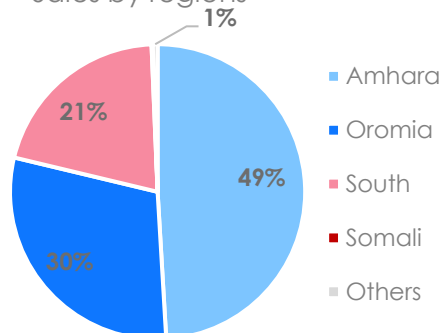
### Sales

- Total sales between 2017-2023: 5,014 (2 percent of total sales); 1,664 with installation and 3,350 without installation
- Sold in 33 out of 63 woredas (only counted if more than 10 sales in a woreda)

Sales by years



Sales by regions



### Review and recommendations

Continue to promote



- #10 product sales out of 28 factsheets
- Ideally sold combined with installation service
- T/WASH field staff product/service rating:

Product	Top product	Flop product
Without installation	48 %	14 %
With installation	57 %	10 %

## SATO pan

Toilet plastic pan with a mechanical seal to close off pit latrines from open air. A weighted trap door opens and closes automatically when the toilet is in use. The SATO pan can be installed on existing or new slabs made of concrete or wood.



### Characteristics

**Price:** 450 ETB (≈ 8 USD)

(2023 average for household purchase)

**Weight:** 0.3 kg

**Dimensions:** 46.5 cm x 24.5 cm x 21 cm

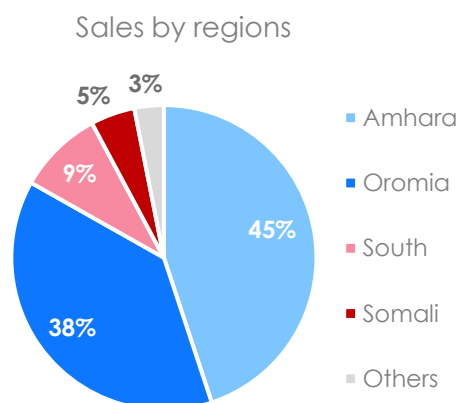
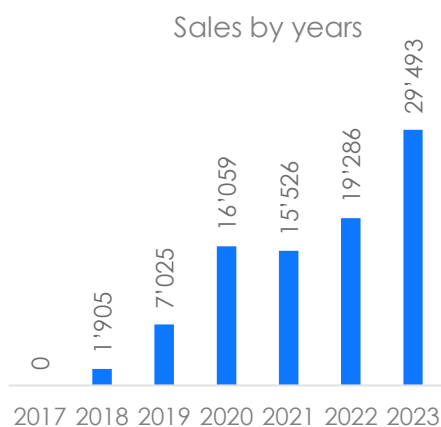
**Manufacturer:** Lixil Corporation

### Strengths and Limitations

- + Light weight for ease of transportation
- + Movable when pit is full
- + Seal/lid closes automatically
- + Low cost
- Requires some water to flush

### Sales

- Total sales between 2017-2023: 89,294 (39 percent of total sales)
- Sold in 60 out of 63 woredas (only counted if more than 10 sales in a woreda)



### Review and recommendations

Continue to promote



- #1 product sales out of 28 factsheets
- T/WASH field staff product/service rating:
  - 62 percent a "top product"
  - 5 percent a "flop product"
- Ideally sold combined with installation service



## SATO pan installation on concrete floor (“retrofit”)

Installation of a SATO pan on an existing concrete slab. This product includes the installation service from a local mason.



### Characteristics

**Price:** 2,600 ETB (≈ 47 USD) including SATO pan, materials and installation service

(2023 average for household purchase)

**Dimensions:** approximately 60 cm x 80 cm elevated platform with SATO pan

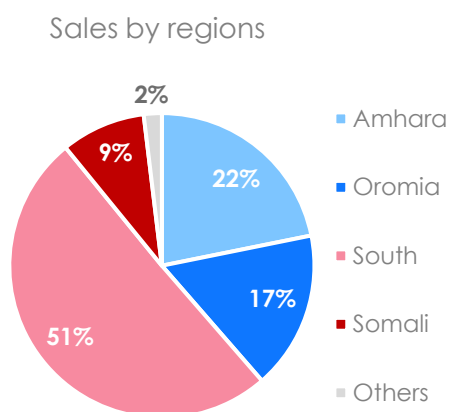
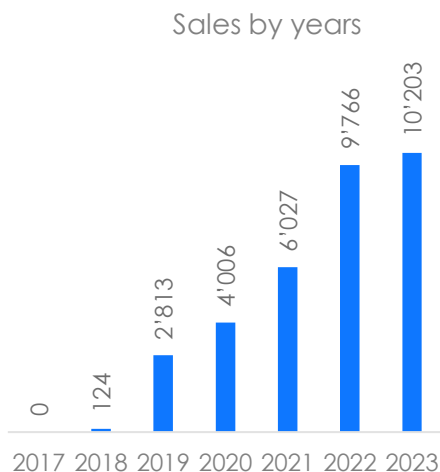
**Manufacturer:** installation by local masons, SATO pan from Lixil Corporation.

### Strengths and Limitations

- + Construction on the spot: ease of transportation
- + Seal/lid closes automatically
- + Includes installation service
- Requires some water to flush
- Not movable when pit is full

### Sales

- Total sales between 2017-2023: 32,939 (14 percent of total sales)
- Sold in 60 out of 63 woredas (only counted if more than 10 sales in a woreda)



### Review and recommendations

Continue to promote



- #2 product sales out of 28 factsheets
- T/WASH field staff product/service rating:
  - 71 percent a “top product”
  - 0 percent a “flop product”
- Ideal option for latrines that already have a concrete slab

## SATO pan installation on dirt floor (“skirting”)

Installation of a SATO pan on an existing solid wooden/dirt platform. This product includes the installation service from a local mason.



### Characteristics

**Price:** 1,200 ETB (≈ 22 USD) - including SATO pan, materials and installation service.

(2023 average for household purchase)

**Dimensions:** floor plastering with concrete approximately 1 m radius around the SATO pan

**Manufacturer:** installation by local masons, SATO pan from Lixil Corporation

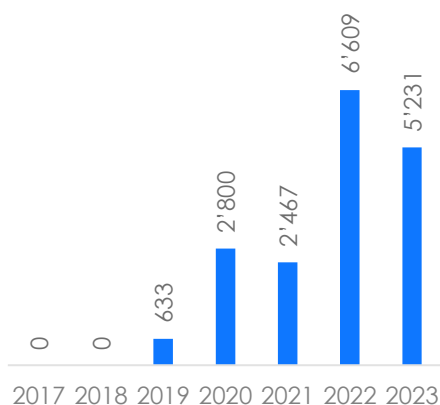
### Strengths and Limitations

- + Construction on the spot: ease of transportation
- + Movable when pit is full
- + Seal/lid closes automatically
- + Low cost
- + Includes installation service
- Requires some water to flush
- Not movable when pit is full
- Often fulfilling just the minimal criteria to count as “improved”

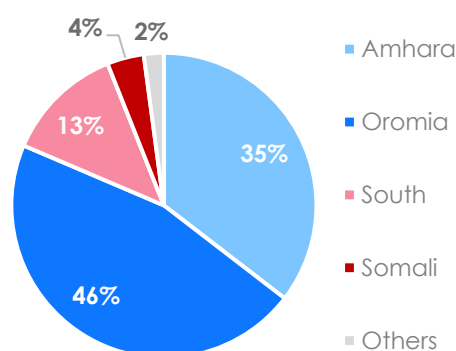
### Sales

- Total sales between 2017-2023: 17,740 (8 percent of total sales)
- Sold in 48 out of 63 woredas (only counted if more than 10 sales in a woreda)

Sales by years



Sales by regions



### Review and recommendations

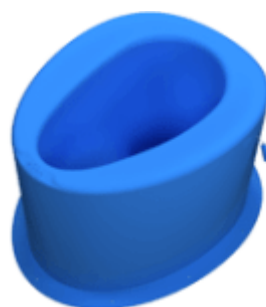
Continue to promote



- #4 product sales out of 28 factsheets
- T/WASH field staff product/service rating:
  - 52 percent a “top product”
  - 5 percent a “flop product”
- Lowest cost option to upgrade to “improved” status

## SATO stool (with or without installation)

Toilet plastic seat with a mechanical seal to close off pit latrines from open air. A weighted trap door opens and closes automatically when the toilet is in use. The SATO stool is designed for sitting instead of squatting and can be installed using nails or concrete on existing or new slabs made of concrete or wood.



### Characteristics

**Price:** 1,050 ETB (≈ 19 USD)  
(2023 average for household purchase)

**Weight:** 5 kg

**Dimensions:** 54.8 cm x 46.0 cm x 30.5 cm

**Manufacturer:** Lixil Corporation

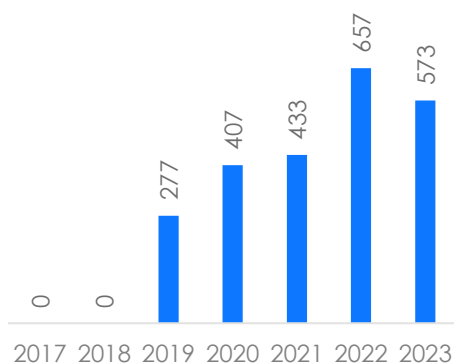
### Strengths and Limitations

- + Light weight for ease of transportation
- + Movable when pit is full
- + Seal/lid closes automatically
- + Appropriate for elderly, children and people with disability
- Requires some water to flush

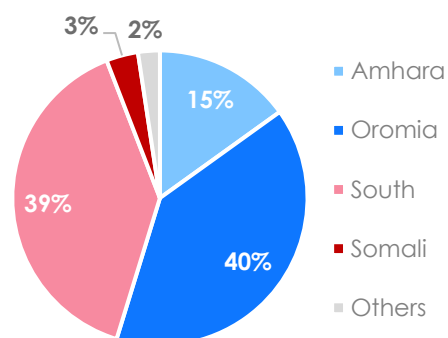
### Sales

- Total sales between 2017-2023: 2,347 (1 percent of total sales); 179 with installation and 2,168 without installation
- Sold in 35 out of 63 woredas (only counted if more than 10 sales in a woreda)

Sales by years



Sales by regions



### Review and recommendations

<p><b>Continue to promote</b></p>	<ul style="list-style-type: none"> <li>• #11 product sales out of 28 factsheets</li> <li>• Ideally sold combined with installation service</li> <li>• T/WASH field staff product/service rating:</li> </ul>		
	Product	Top product	Flop product
	Without installation	57 %	5 %
	With installation	67 %	5 %

## SATO flex

Toilet plastic pan with a mechanical seal to close off pit latrines from open air. It includes a footrest to make the area around the pan fully washable. A weighted trap door opens and closes automatically when the toilet is in use. The SATO flex can be installed on existing or new slabs made of concrete or wood.



### Characteristics

**Price:** 900 ETB (≈ 16 USD)

(2023 average for household purchase)

**Weight:** 1 kg

**Dimensions:** 50.4 cm x 44.0 cm x 21.5 cm

**Manufacturer:** Lixil Corporation

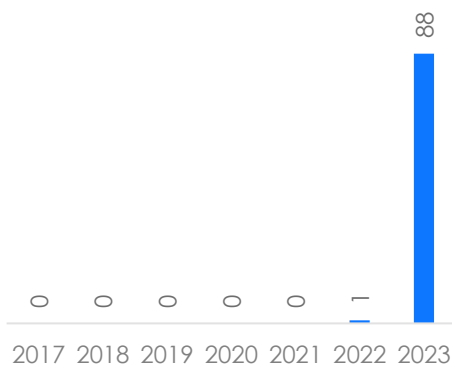
### Strengths and Limitations

- + Light weight for ease of transportation
- + Movable when pit is full
- + Seal/lid closes automatically
- + Has footsteps (easy washable around the pan)
- Requires some water to flush

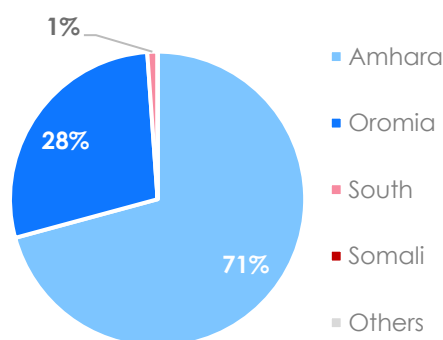
### Sales

- Total sales between 2017-2023: 89 (less than 1 percent of total sales); 4 with installation and 85 without installation
- Sold in 2 out of 63 woredas (only counted if more than 10 sales in a woreda)

Sales by years



Sales by regions



### Review and recommendations

Continue to promote



- #24 product sales out of 28 factsheets
- Ideally sold combined with installation service
- T/WASH field staff product/service rating:

Product	Top product	Flop product
Without installation	29 %	10 %
With installation	29 %	5 %

## Toilet sub-structure

Concrete rings reinforced with iron bars for pit lining (i.e. to provide stability to the latrine pit). Mostly used when the soil type is loose (e.g. sandy, silt, clay, or waterlogged). Concrete rings can be used for a single pit and twin pits. Toilet sub-structure can also be made of other materials (e.g., car tyres, barrels).



### Characteristics (for concrete rings)

**Price:** 2,500 ETB per ring (≈ 28 USD)

(2023 average for household purchase)

**Weight:** 60 – 100 kg per ring

**Dimensions:** diameter: 90 cm; height: 1 m; thickness: approximately 2 - 3 cm

**Manufacturer:** locally manufactured by small businesses

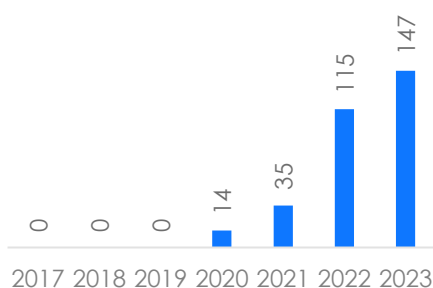
### Strengths and Limitations

- + Durable
- + Easy installation
- Heavy to transport
- Expensive (about three rings are required as a latrine pit is typically 3 meter deep)

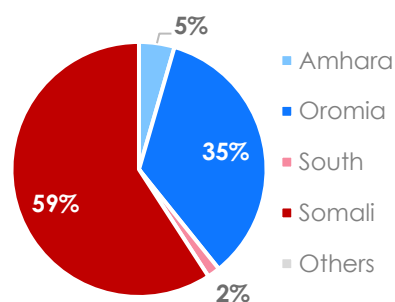
### Sales

- Total sales between 2017-2023: 311 (less than 1 percent of total sales); 50 concrete rings without installation, 166 with installation (single pit); 3 with installation (twin pit); and 92 sub-structures with other materials
- Sold in 4 out of 63 woredas (only counted if more than 10 sales in a woreda)

Sales by years



Sales by regions



### Review and recommendations

Continue to promote



- #18 product sales out of 28 factsheets
- T/WASH field staff product/service rating:

Product	Top product	Flop product
Without installation	29 %	29 %
With installation (single pit)	14 %	38 %
With installation (twin pit)	0 %	33 %
With other materials	24 %	24 %

## Toilet super-structure

Super-structures made of Hollow Concrete Block (HCB) or other materials (e.g., bricks, wood/mud, iron sheet)

### Characteristics

**Price:** variable, but typically 5,000 ETB or more (≈ 91 USD) (2023 average for household purchase)

**Specifications:** no standardized offering: different options as per customers' and business partners' preference

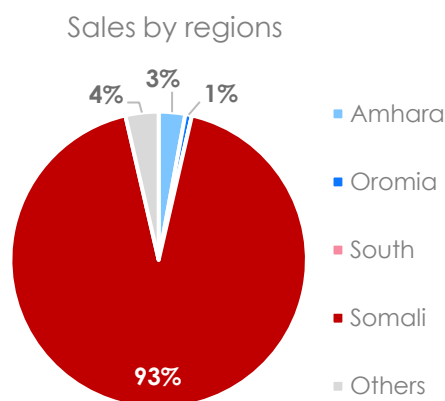
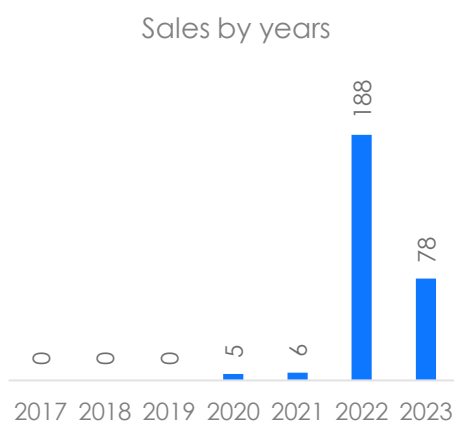
**Manufacturer:** locally manufactured by small businesses

### Strengths

- + Usually durable
- Expensive and usually rural  
HHs prefer to construct super-structure by themselves

### Sales

- Total sales between 2017-2023: 277 (less than 1 percent of total sales); 123 super-structures with HCB and 154 super-structures with other materials
- Sold in 3 out of 63 woredas (only counted if more than 10 sales in a woreda)



### Review and recommendations

<p>Continue to explore</p> <p>★ ★ ★</p>	<ul style="list-style-type: none"> <li>• #19 product sales out of 28 factsheets</li> <li>• Focus on full toilet construction and not just super-structure</li> <li>• T/WASH field staff product/service rating:</li> </ul>		
	Product	Top product	Flop product
	With HCB	14 %	24 %
With other materials	10 %	14 %	

## Full toilet solutions

Full toilet solutions include full toilet construction: simple pit, full toilet single offset, full toilet semi offset, and full toilet twin offset.

### Characteristics

**Price:** variable, but typically 5,000 ETB or more (≈ 91 USD) (2023 average for household purchase)

**Specifications:** no standardized offering: different options as per customers' and business partners' preference

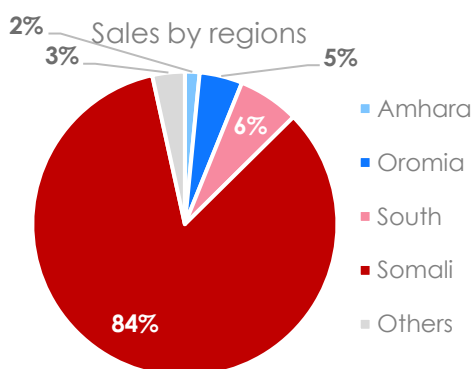
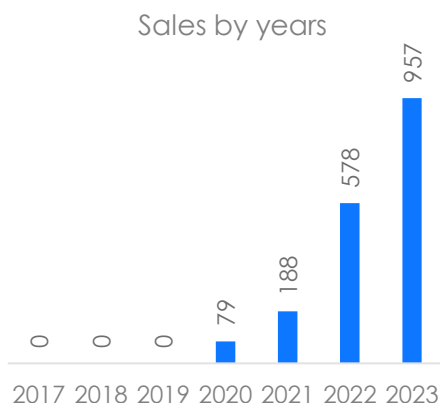
**Manufacturer:** locally manufactured by small businesses

### Strengths and Limitations

- + Usually durable
- + Usually clearly fulfilling "improved" status
- Expensive and usually beyond the affordability of rural households

### Sales

- Total sales between 2017-2023: 1,802 (less than 1 percent of total sales); 991 simple pit; 775 single offset; 18 twin offset; and 18 semi offset
- Sold in 8 out of 63 woredas (only counted if more than 10 sales in a woreda)



### Review and recommendations

<p><b>Continue to promote</b></p> <p>★ ★ ★</p>	<ul style="list-style-type: none"> <li>• #13 product sales out of 28 factsheets</li> <li>• T/WASH field staff product/service rating:</li> </ul>		
	Product	Top product	Flop product
	full toilet simple pit	29 %	14 %
	full toilet single offset	19 %	10 %
	full toilet semi offset	10 %	19 %
full toilet twin offset	5 %	14 %	

## Other sanitation-related products

These products consist of toilet cleaning brushes and lids to cover the drop holes of pit latrines. Toilet cleaning brushes are needed to regularly clean strains from plastic toilet pans.



### Characteristics

**Price:** variable

(2023 average for household purchase)

**Manufacturer:** locally manufactured by small businesses (lids), imported or locally manufactured (toilet brushes)

### Strengths and Limitations

Toilet cleaning brush:

- + Low cost
- + Available in market centers

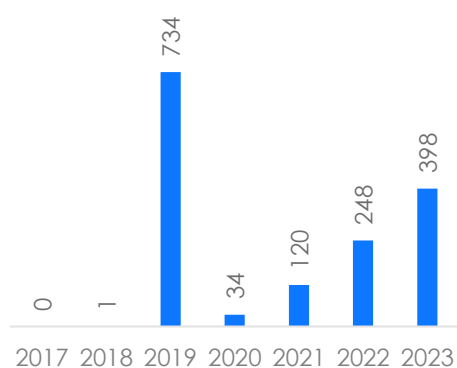
Lid to cover drop hole:

- + Low cost
- + Easy to manufacture

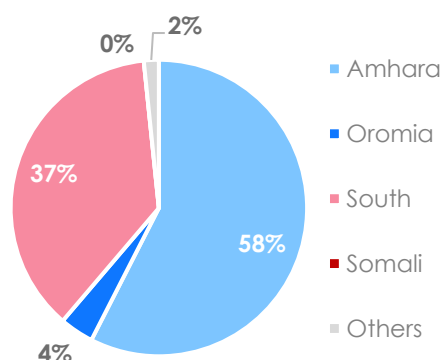
### Sales

- Total sales between 2017-2023: 1,535 (less than 1 percent of total sales); 1,396 toilet cleaning brushes and 139 lids
- Sold in 12 out of 63 woredas (only counted if more than 10 sales in a woreda)

Sales by years



Sales by regions



### Review and recommendations

<b>Continue to promote</b>  <i>(no star rating)</i>	<ul style="list-style-type: none"> <li>• #14 product sales out of 28 factsheets</li> <li>• T/WASH field staff product/service rating:</li> </ul>		
	Product	Top product	Flop product
	Toilet cleaning brush	48 %	0 %
	Lid	0 %	48 %



## Handwashing facility (faucet fitted)

Handwashing facility made from a plastic water container fitted with a tap.

### Characteristics

**Price:** variable

(2023 average for household purchase)

**Volume:** variable

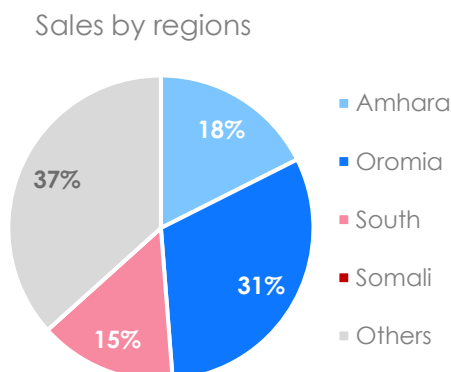
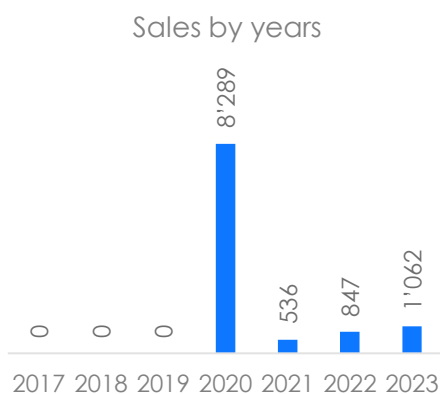
**Manufacturer:** locally manufactured by small businesses

### Strengths and Limitations

- + Movable (no plumbing required)
- + Easy to manufacture locally
- Tap needs to be touched by hand

### Sales

- Total sales between 2017-2023: 10,734 (5 percent of total sales)
- Sold in 35 out of 63 woredas (only counted if more than 10 sales in a woreda)



### Review and recommendations

Continue to promote



- #6 product sales out of 28 factsheets
- T/WASH field staff product/service rating:
  - 14 percent a "top product"
  - 14 percent a "flop product"
- Need for new business models to sustain/increase sales

## Handwashing facility (Happy Tap)

Pre-manufactured plastic handwashing station designed to minimize water usage.



### Characteristics

**Price:** 1,000 ETB (≈ 15 USD)  
(2023 average for household purchase)

**Volume:** 15 L (allows 50 - 70 uses per fill)

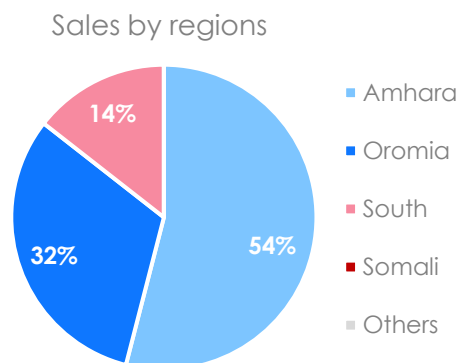
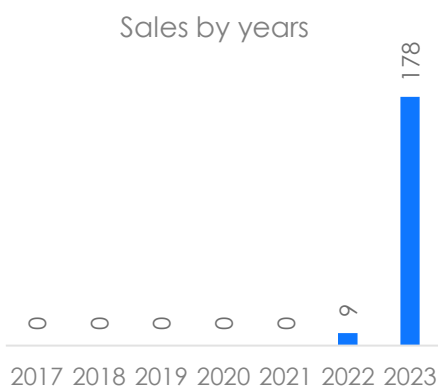
**Manufacturer:** Happy Tap

### Strengths and Limitations

- + Water efficient
- + Movable (no plumbing required)
- Not locally manufactured

### Sales

- Total sales between 2017-2023: 187 (less than 1 percent of total sales)
- Sold in 4 out of 63 woredas (only counted if more than 10 sales in a woreda)



### Review and recommendations

Continue to promote



- #20 product sales out of 28 factsheets
- T/WASH field staff product/service rating:
  - 43 percent a "top product"
  - 5 percent a "flop product"
- Need for new business models to sustain/increase sales

## Handwashing facility (no touch)

Locally manufactured handwashing station that can be used without touching a tap by hand.



### Characteristics

**Price:** variable

(2023 average for household purchase)

**Volume:** variable

**Manufacturer:** not widely available

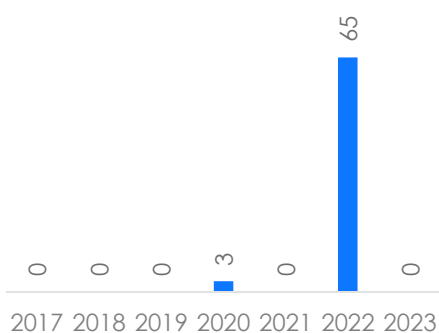
### Strengths and Limitations

- + No tap that needs to be touched
- + Movable (no plumbing required)
- Prototype-stage
- Not widely available

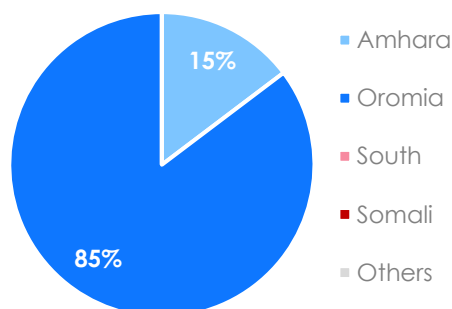
### Sales

- Total sales between 2017-2023: 68 (less than 1 percent of total sales)
- Sold in 1 out of 63 woredas (only counted if more than 10 sales in a woreda)

Sales by years



Sales by regions



### Review and recommendations

Continue to explore



- #27 product sales out of 28 factsheets
- T/WASH field staff product/service rating:
  - 10 percent a "top product"
  - 10 percent a "flop product"
- Need for new business models to sustain/increase sales

## Nazava water filter

Tabletop household water filter, using a silver-impregnated ceramic candle filter.

Microorganisms are physically removed from the water that flows through the ceramic candle under gravity.



### Characteristics

**Price:** 1,500 ETB (≈ 28 USD)  
(2023 average for household purchase)

**Specifications:** treatment capacity: 7,000 L and storage capacity: 18 L

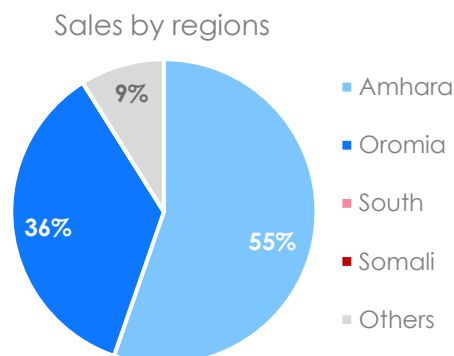
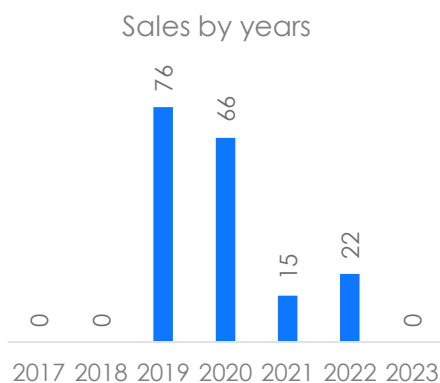
**Manufacturer:** Nazava Trading PLC

### Strengths and Limitations

- + Safe water storage container after treatment
- + Effective in removing bacteria and protozoa (>99.9%)
- Less effective in removing viruses

### Sales

- Total sales between 2017-2023: 179 (less than 1 percent of total sales)
- Sold in 5 out of 63 woredas (only counted if more than 10 sales in a woreda)



### Review and recommendations

Continue to promote



- #21 product sales out of 28 factsheets
- T/WASH field staff product/service rating:
  - 19 percent a "top product"
  - 10 percent a "flop product"

## Tulip water filter

Tabletop household water filter, using a silver-impregnated ceramic candle filter.

Microorganisms are physically removed from the water that flows through the ceramic candle under gravity.



### Characteristics

**Price:** 1,500 ETB (≈ 28 USD)  
(2023 average for household purchase)

**Specifications:** treatment capacity: 7,000 L and storage capacity: 20 L

**Manufacturer:** Tulip Addis Water Filter

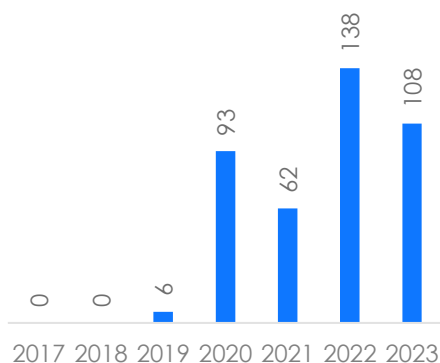
### Strengths and Limitations

- + Safe water storage container after treatment
- + Effective in removing bacteria and protozoa (>99.9%)
- Less effective in removing viruses

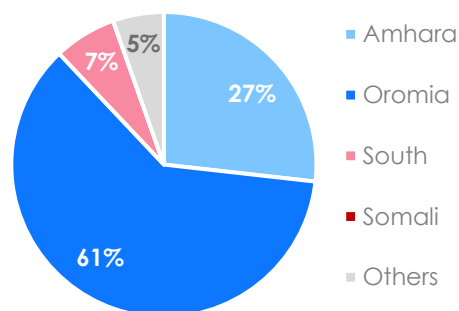
### Sales

- Total sales between 2017-2023: 407 (less than 1 percent of total sales)
- Sold in 14 out of 63 woredas (only counted if more than 10 sales in a woreda)

Sales by years



Sales by regions



### Review and recommendations

Continue to promote



- #17 product sales out of 28 factsheets
- T/WASH field staff product/service rating:
  - 33 percent a "top product"
  - 5 percent a "flop product"

## P&G Purifier of Water

A powder that comes in small affordable, easy-to-use packets. It combines flocculation and disinfection to produce clean drinking water.



### Characteristics

**Price:** 25 ETB ( $\approx$  0.46 USD)  
(2023 average for household purchase)

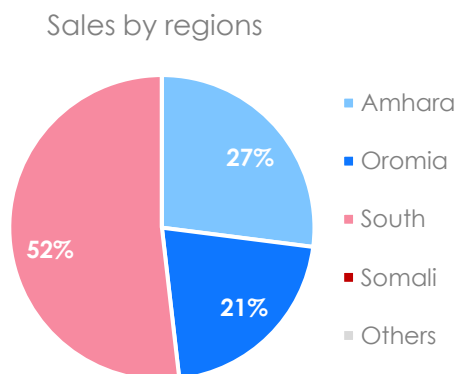
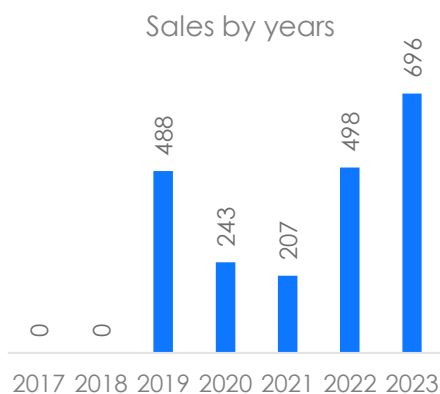
**Treatment capacity:** 10 L / sachet

**Composition:** calcium hypochlorite and iron sulphate

**Manufacturer:** Procter & Gamble

### Sales

- Total sales between 2017-2023: 2,132 (less than 1 percent of total sales)
- Sold in 4 out of 63 woredas (only counted if more than 10 sales in a woreda)



### Review and recommendations

Continue to promote



- #12 product sales out of 28 factsheets
- T/WASH field staff product/service rating:
  - 10 percent a "top product"
  - 5 percent a "flop product"

## Wuha Agar

Liquid chlorine for treatment of non-turbid water. A bottle of 150 mL can treat about 1,000 L. Local version of PSI's brand "Water Guard".



### Characteristics

**Price:** 20 ETB (≈ 0.3 USD)

(2023 average for household purchase)

**Treatment capacity:** 1,000 L / bottle

**Composition:** sodium hypochlorite (1.25%)

**Manufacturer:** locally manufactured by Gihon Industrial PLC on behalf of PSI

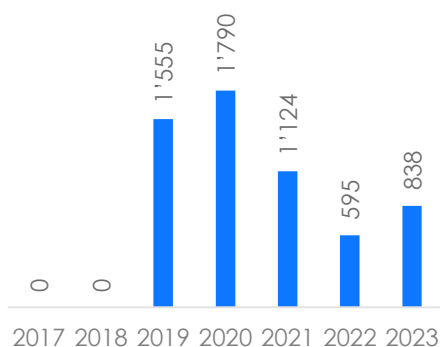
### Strengths and Limitations

- + Safe water storage container after treatment
- + Effective in removing bacteria and viruses (>99.9%)
- Less effective for removing protozoa
- Not effective for turbid water

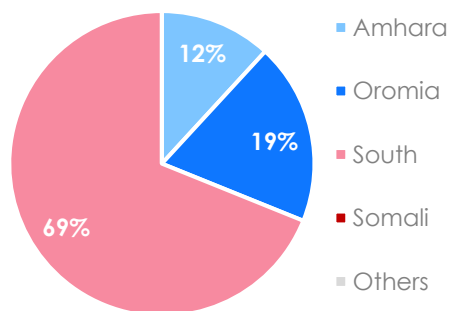
### Sales

- Total sales between 2017-2023: 5,902 (3 percent of total sales)
- Sold in 18 out of 63 woredas (only counted if more than 10 sales in a woreda)

Sales by years



Sales by regions



### Review and recommendations

Continue to promote



- #8 product sales out of 28 factsheets
- T/WASH field staff product/service rating:
  - 24 percent a "top product"
  - 10 percent a "flop product"

## Reusable sanitary pads

Products used to manage menstrual hygiene - made from cotton and other raw materials. Different types of reusable sanitary products such as pads with under pants, pads inside, waterproof outside, with button and with wings.



### Characteristics

**Price:** 100 ETB (≈ 2 USD) per pack

(2023 average for household purchase)

**Package:** 4 pads per pack

**Manufacturer:** locally manufactured (mainly by Maryod, but also by Adey, Mela) or imported (by AFRIpads)

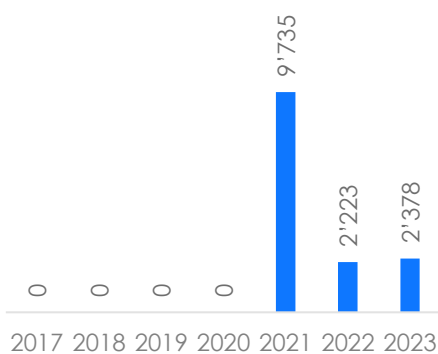
### Strengths and Limitations

- + Cost effective (compared to disposable sanitary pads)
- + Environmentally sustainable
- Washing the pads can be inconvenient

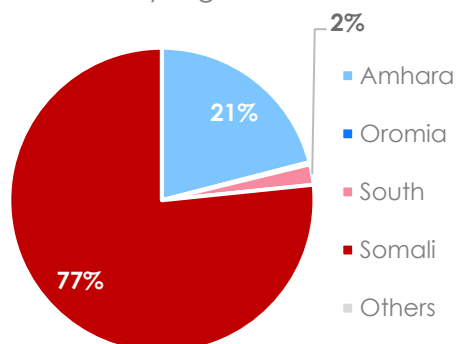
### Sales

- Total sales between 2017-2023: 14,336 (6 percent of total sales)
- Sold in 15 out of 63 woredas (only counted if more than 10 sales in a woreda)

Sales by years



Sales by regions



### Review and recommendations

Continue to promote



- #5 product sales out of 28 factsheets
- T/WASH field staff product/service rating:
  - 29 percent a "top product"
  - 5 percent a "flop product"
- Need for new business models to sustain/increase sales