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Strengthening Capacity in Agriculture Livelihoods and Environment

World Vision

Household Hygienic Environments in the Daro Lebu Woreda, Ethiopia

Deep Dive Report

March 2024

DISCLAIMER

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RECOMMENDED CITATION

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PARTICIPATING ORGANIZATIONS

Contents

Acronyms

AIM slab	Plastic Toilet Slab Manufactured by Silafrica (Brand Name)
Baby-WASH	Water, Sanitation, and Hygiene for infants and small children
DL	Daro Lebu
FGD	Focus Group Discussion
HCD	Human Centered Design
HWIS	Household Water Insecurity Scale
KC	Kurfa Chele
NCG	Nurturing Care Groups
NGO	Non-Governmental Organization
ORDA	Organization for Rehabilitation and Development in Amhara Ethiopia
PReSERVE	Poverty Reduced Sustainably in an Environment of Resilient and Vibrant Economy
PSI	Population Services International Ethiopia
PSNP	Productive Safety Net Program
RCT	Randomized Control Trial
RFSA	Resilience Food Security Activity
SATO	Plastic Toilet Pan Patented by Lixil Corporation (Brand Name)
SBC	Social and Behavior Change
SPIR II	Strengthen PSNP Institutions and Resilience Phase II
WASH	Water, Sanitation, and Hygiene
WASHPaLS #2	Water, Sanitation, and Hygiene Partnerships and Learning for Sustainability #2

Executive Summary

This visual deep dive report summarizes the insights from a rapid exploration of household hygiene with a focus on improved water, sanitation, and hygiene (WASH) for infants and small children (Baby-WASH) in the Daro Lebu Woreda of West Hararghe. The deep dive was conducted in partnership with PRO-WASH & SCALE and hosted by SPIR-II's consortium partners: World Vision, CARE, and Organization for Rehabilitation and Development in Amhara (ORDA) Ethiopia. Furthermore, the research team provided targeted recommendations based on this deep dive to inform an upcoming Randomized Control Trial of household hygiene within SPIR-II.

What is a Deep Dive?

A deep dive is an intensive and focused period of time to move a strategy forward and address challenges. This deep dive included a workshop to compile existing learning, household visits, focus groups to explore hygiene products, and co-design activities with local entrepreneurs and community members.

What Were the Aims of this Deep Dive?

1. To recommend a package of transformative WASH key products and Social and Behavior Change (SBC) focused on the reduction of enteric infections in infants. This will inform an upcoming randomized control trial (RCT) on enteric infections in infants under 6 months old in the Daro Lebu context.
2. To clarify opportunities to strengthen market systems around household hygiene in the Daro Lebu Woreda—and beyond.

A parallel study was conducted in the Kurfa Chele Woreda which involved the participation of three resilience food security activities (RFSAs) projects in Ethiopia: SPIR-II, PReSERVE, and Ifaa. All the three RFSAs participated in the Kurfa Chele deep dive which was hosted by SPIR-II.

Key Findings

Longstanding NGO programming in DL has established an expectation that donors will provide free hygiene products. This has created a diminished demand for "big ticket" hygiene products and services such as water filters, latrines, and handwashing stations. There is a strong belief that these things should be free from NGOs or the government. This is unique to the Kurfa Chele Woreda, where there have been fewer interventions and stronger demand.

NGO interactions in Daro Lebu have created a strong foundation for hygienic behaviors. This includes the use of latrines, knowledge of handwashing practices, more frequent household cleaning, and increased dietary diversity through access to fruits and grains. These behaviors are also stronger in Daro Lebu than in Kurfa Chele.

While most households have separate and robust kitchens, these are often doubled as small animal rooms for chickens and goats. Compared to Kurfa Chele, the kitchen areas in Daro Lebu were much more robust, with doors and a lock. This means that the kitchen huts were used for cooking, food preparation, storage, and often also for small animals.

Background

SECTION 1

Life and Culture in Daro Lebu Woreda

Geography

- Daro Lebu has a population of 202,074 people. Daro Lebu is bordered on the south by the Shebelle River, which separates it from the Bale Zone, on the west by the Arsi Zone, on the northwest by Guba Koricha, on the north by the Habro, and on the east by Boke.
- The woreda is characterized mostly by flat and undulating land features with altitudes ranging from 1,350 up to 2,450 meters above sea level. The agro-ecology of the woreda is 44% Kola (low-land) and 56% Woyena Dega (Mid-land).
- Rainfall is bimodal and its distribution is mostly uneven. Generally, there are two rainy seasons: the short rainy season “Belg” lasts from mid-February to April whereas the long rainy season “kiremt” is from June to September.

Society and Religion

- Daro Lebu is predominantly Muslim (93.16%), with a small portion of Orthodox Christians (6.57%).
- This Islamic culture influences some household hygiene practices, such as not keeping dogs at the home, and practicing water ablution after latrine use.
- Like Kurfa Chele, Daro Lebu is patrilineal, meaning that, upon marriage, women move to their husband’s village.

Economics and Livelihoods

- Daro Lebu relies on both chat and coffee production.
- Most families are reliant on Chat (Khat—a chewed leaf stimulant) for their income. This is harvested and sold by women in local markets.
- Food is purchased daily from the Chat earnings.
- The major towns of Daro Lebu are Mechara and Micheta and offer daily markets for the trade of chat, coffee, fruits, vegetables, and grains.
- Young men and women migrate internally to larger cities and towns to find employment, and young women travel to neighboring Arab countries to find work as domestic help.

Comparing Daro Lebu and Kurfa Chele

Similarities

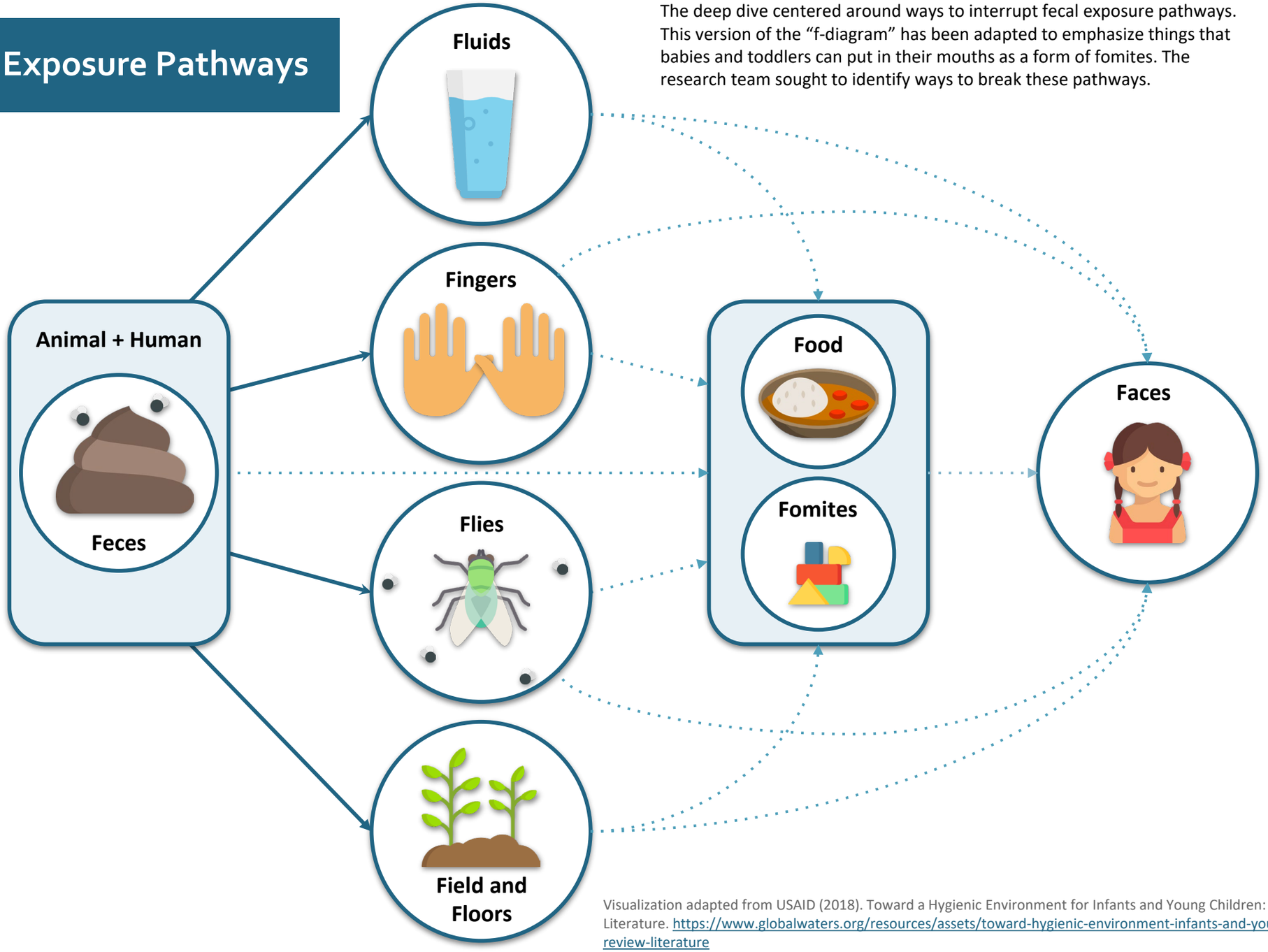
- Both Woredas are predominantly Muslim which impacts attitudes and practices around personal hygiene. For example, the practice of just using water for handwashing is seen as a religious practice in both contexts.
- Both Woredas utilize multiple sources of water (tap, spring, river, pond) for different households.
- Eating, sleeping, and daily life all take place inside the main room on woven plastic mats. The cleaning of these mats varies but does seem to be more frequent in Daro Lebu.
- Both Woredas rely on Chat, a chewable cash crop stimulant, as the main source of income. Chat is primarily sold by women daily at the market, with income from the Chat sales going to purchase food each day. As such women have higher economic empowerment than in other areas.

Differences

- As expressed in the FGDs, there is a strong expectation that donors will provide free hygiene products, specifically when it comes to larger ticket items such as latrines, water filters, and livestock. This may be connected to the long-term development presence
- There is relatively strong knowledge around hygienic practices such as handwashing, home gardening, and fruit cultivation in comparison to Kurfa Chele. This includes higher dietary diversity with more fruits and vegetables available than in Kurfa Chele.
- Influenced by the ancient city of Harar, flooring in the main rooms in Kurfa Chele is raised about 6 inches from the entrance. Raised floors are not as common in Daro Lebu, in which the entrance is on the same level as the rest of the home.
- The common home layout is slightly different between Daro Lebu and Kurfa Chele. In Kurfa Chele cooking is predominantly done in lean-to sheds and animals are kept inside the home. In Daro Lebu animals are kept inside a separate kitchen hut.

Fecal Exposure Pathways

The deep dive centered around ways to interrupt fecal exposure pathways. This version of the "f-diagram" has been adapted to emphasize things that babies and toddlers can put in their mouths as a form of fomites. The research team sought to identify ways to break these pathways.



Visualization adapted from USAID (2018). Toward a Hygienic Environment for Infants and Young Children: A Review of the Literature. https://www.globalwaters.org/resources/assets/toward-hygienic-environment-infants-and-young-children-review-literature

Targeted Behaviors

To break the fecal contamination pathways previously illustrated “f-diagram,” we targeted a series of behaviors that can be bucketed into six categories: baby, water, food, environment, feces, and hands. The “Fs” have been included in parentheses to help situate the behaviors in the “f-diagram.” This framework evolved throughout the research to best represent the hygienic environment context.

Baby
(floors and fomites)

- Using safe baby space
- Using safe (baby) sleep areas

Water
(fluids)

- Collecting and transporting water safely
- Treating water for safe consumption
- Storing and serving water for safe consumption

Food
(food and fingers)

- Storing and reheating food safely
- Storing and safely drying utensils and dishes
- Preparing and cooking food safely (👏🏽)
- Eating and feeding safely (👏🏽)

Environment
(floors, flies, and fomites)

- Maintaining household items (clothing, bedding, and items) safely
- Disposing of garbage and liquids safely
- Ensuring safe ground, floors, and mats (indoor and outdoor)
- Ensuring safe nighttime animal containment (🐓)

Feces
(feces and flies)

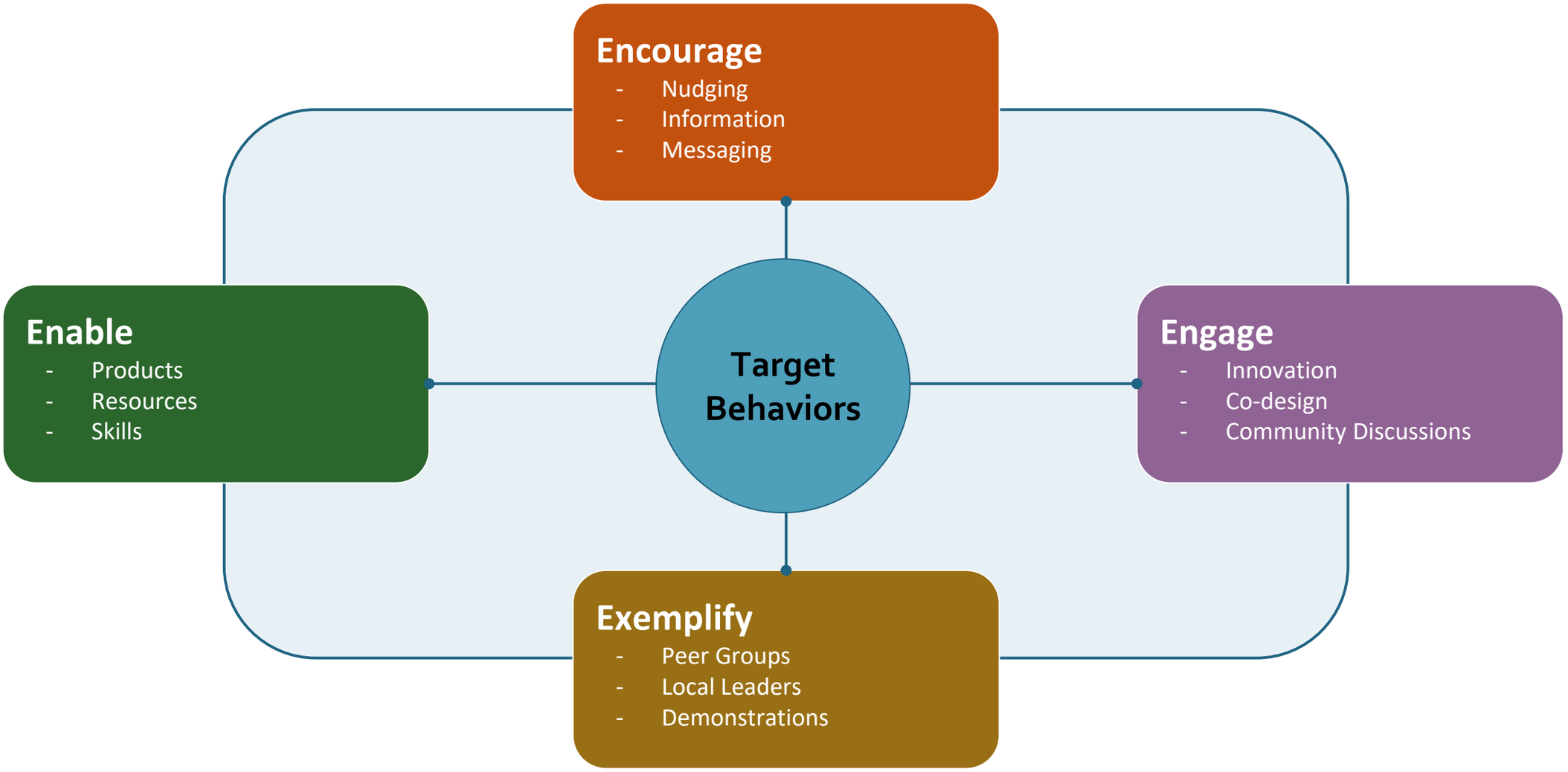
- Using improved latrine (👏🏽)
- Disposing of infant feces safely (🧸+👏🏽)
- Collecting and disposing of animal feces safely (🐓+👏🏽)

Hands
(fingers)

- Using handwashing station
- Handwashing with soap

Intervention Mix for Behavior Change: The Sustainable Lifestyles 4E Model

To help situate our recommendations, we adopted the following model as an intervention mix to ensure a holistic approach to behavior change strategies. This model recommends blending strategies that enable, encourage, engage, and exemplify targeted behaviors.



UK's Department for Environment, Food and Rural Affairs (DEFRA). https://www.gov.uk/government/publications/a-framework-for-pro-environmental-behaviors

Deep Dive Approach

SECTION 2

Deep Dive Team

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Deep Dive Approach

In collaboration with three ongoing RFSAs in Ethiopia, PRO-WASH & SCALE facilitated a deep dive as part of the HCDforWASH Coaching Cohort and formative research for an upcoming RCT by SPIR-II.

Human-Centered Design (HCD) is an innovative problem-solving methodology to design contextual solutions around products, strategies, and messaging. The approach aligns with three phases: HEAR, CREATE, and DELIVER.

A common approach in HCD, a deep dive is an intensive and focused period of time to move a strategy forward and unstick challenges. A deep dive often includes rich discussions between key team members alongside field research and collaborative sensemaking.

This deep dive included a workshop to compile existing learning, household visits with early adopters, focus groups to explore hygiene products, and co-design activities with local entrepreneurs and community members. This was partnered with rich discussion and reflection time with the team throughout the fieldwork.

- **Workshop 1** – Alignment Workshop (13–14 November 2023), Addis Ababa
- **Field Trip** – Deep Dive 1 (15–22 November 2023), Kurfa Chele
- **Workshop 2** – Market-based Hygiene (23–24 November 2023), Addis Ababa
- **Field Trip 2** – Deep Dive 2 (26 November–1 December 2023), Daro Lebu

Data Collection Methods

- Nine household visits with households within three Kebeles of the Daro Lebu Woreda. The visit contained two parts:
    - **Semi-structured observations** of the targeted behavior areas and tested products including photographs and open discussion with a household member.
    - **Semi-structured participatory interviews** which focused on a card sorting technique in which visual cards of the targeted behaviors were shown to participants as conversation starters. During the discussion cards were sorted into three piles based on the discussion: frequently doing, sometimes doing, and not doing.
- 11 semi-structured mixed focus group discussions on potential hygiene focused on key hygiene products and co-design of potential household solutions. Mixed groups were selected so that we could hear a variety of responses and prompts shared with both women and men to support engagement.
- Four market scans (Addis Ababa, Dire Dawa, Gelemso, and Micheta) on the supply of hygiene products such as soap, filters, and potties.
- Two WASH Business Center interviews on the opportunities and challenges to promote and provide key hygiene products and services. WASH Business Centers are government- and SPIR-II-supported businesses that focus on providing WASH services to community members. This can include water system supply and maintenance as well as improved latrine installation.

Informed consent was obtained from each participant prior to the start of observations, interviews, and focus groups and included consent for photographs. Data was collected in photographs and discussion notes stored in Kobo Toolbox and in notebooks. Interviews and community discussions were conducted in Afan Oromo with fluent team members.

Analysis and Sensemaking

Analysis was done through a process of structured collaborative thematic analysis in which data was discussed and reviewed with the enumeration team during daily debriefs. Additional graphs and summaries were reviewed from the Kobo Toolbox automatic visualization tools. Insights were structured using an insight formula and coded with one of the 17 targeted behaviors. These themes evolved throughout the research as can be seen on Slide 16.

Interviewed Households (n = 9)

To explore household hygiene practices in Daro Lebu, we conducted in-depth semi-structured interviews with primarily PSNP households in three kebeles. The kebeles were selected to include a range of remote kelebes and those closer to the main town of Machete in Daro Lebu. The results of these interviews are not intended to be representative of the Daro Lebu woreda, but rather to qualitatively identify themes that resonate across the kebeles.

HH	Village	Number of HH members	Mother pregnant	Child under 5	Infant under 1	Total children	Household status
DL-A	Jilbo	13	No	0	1	11	non-PSNP
DL-B	Sororo	4	Yes	1	0	9	PSNP
DL-C	Jilbo	7	No	2	0	5	PSNP
DL-D	Jilbo	11	No	2	1	6	PSNP
DL-E	Jilbo	11	No	1		9	PSNP
DL-F	Sororo	7	No	1	0	5	PSNP
DL-G	Gelmejeju	9	No	0	0	4	PSNP
DL-H	Jilbo	11	No	0	1	4	PSNP
DL-I	Gelmejeju	6	Yes	0	0	2	PSNP

- Productive Safety Net Program (PSNP)

Sample Research Cards

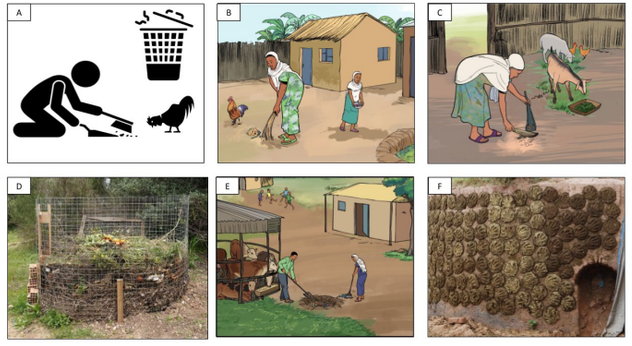
Using a handwashing station (latrine and household) 1
Idoo harka dhiqannaa fayyadamuu
የእጅ መታጠቢያ ስፍራን መጠቀም

Using safe baby areas 10
Idoo /Bakka hirriba daa'imaa nageenya qabu fayyadamuu
ደህንነቱ የተጠበቀ የሕፃን ቦታን መጠቀም

Storing and sharing water for safe consumption 4
Bishaan qulqullinaan meeshaa qulqulluutti kuusuu fi fayyadamuu
ውሃን በንፁህ እቃ በማጠራቀም ለመጠጥ መጠቀም

Eating and feeding safely 9
Bakka tapha daa'immanii fi nyaataa nageenya qabu fayyadamuu
ደህንነቱ የተጠበቀ የሕፃን ጨዋታ እና የመመገቢያ ቦታን መጠቀም

Disposing animal feces safely 12
Manca/sagarraa bineeldotaa of eeggannoodhan dhabamsiisuu
የእንስሳትን ሰገራ/አይነምድር በአስተማማኝ ሁኔታ ማስወገድ



Keeping animals seperate from main living areas 17
Godoo/iddoo bineensotaa fayyadamuu horsiisuu
የእንሰሳትን ቦታን በምጠቀም ማርባት

Hygienic Behaviors: Insights and Ideas

SECTION 3

Behavior selected as the one they aren't doing that they are the most worried about.

Behavior selected as the one they do frequently that they think is the most important for their baby's health.

This section draws on nine interviews with targeted households and 11 focus group discussions (FGDs) with community members.

Safe Baby Spaces

- Unlike in KC, floors in DL are not raised inside the home, which means that there is more dirt tracked into the household from daily use.
- **Observation**: Babies and small children are playing inside or in the dusty playing areas with a lot of animal feces including goat and chicken.
- Most households are washing mats at the river weekly. This is more frequently than in KC. However, there is a lot more dirt tracked into the home because of the lack of raised flooring.
- Several households described having an extra plastic woven mat specifically for children playing. This is often put outside on the ground in the shaded veranda area. However, as seen in the image, this is not a guarantee of a safe environment.
- All the teams did not observe any baby or toddler toys within homes or even in the local market.
- Several families described previously using mosquito nets designed for babies, but these were frequently broken and not long-lasting.
- **FGDs:** Most participants were interested in playpens, but cost is a main challenge. They would like to have toys inside the playpens to keep kids entertained and prefer larger playpens with improved flooring, nets, and walls.

→ **Idea:** Explore opportunities to co-design playpens with communities using easy-to-clean materials.

→ **Idea:** Promote the use of washable floor mats that can be used for infants.

One households selected this behavior as the one they aren't doing that they are the most worried about.

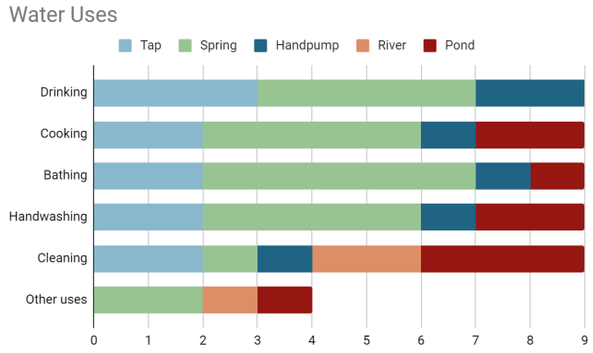
Safe Sleep Spaces

- Most families sleep together in the same room, on low mattresses on the floor. Many households do not have enough mattresses, especially in larger families.
- A few households had a raised bed frame for a limited number of family members.
- All mothers described wanting to have their baby with them at night to be able to more easily breastfeed.
- Bed nets were not observed in any homes (this was not the same as DL). FGD respondents said they used to use bed nets before when they were given for free from the government—several years before.
- Mothers recognized that bed nets are valuable for preventing bug bites and flies. Mosquito-based diseases are not common, however, there has been malaria, dengue, and chikungunya have been reported recently.
- The houses in DL are quite tall, which could create challenges in effectively hanging and using bed nets.

→ **Idea**: Explore opportunities to promote bed nets in pharmacies or other shops as they are currently not available in the local market and rely on government sponsorship.

Safe Collection and Transport of Water

- Similarly to Kurfa chele, sources of water are varied for different purposes and are seasonal. Two of the villages also were experiencing low or no functionality of nearby water points influencing water access.
- Water access and water security vary significantly between villages, and as such must be accessed village by village. The results from the three villages in this study highlight the diversity of water access in Daro Lebu.
- Most families use donkeys for water collection. If households don't have a donkey, they borrow one from neighbors or family members. In KC the fee for borrowing a donkey is another round of water collection. Donkey feces is very common at water points and may be a contamination risk.
- Water collection responsibilities include girls, boys, and mothers in the Daro Lebu areas. Men collect water as they go to the field in a 3L jug for the day.



→ **Idea:** HWISE could potentially be used to better understand the subjective experiences of water.

→ **Idea**: Improving access to donkeys could also increase water security. Some old families are "subsidizing" donkeys for water collection.

→ **Idea**: Spring sources that are in valleys can be difficult and dangerous to access, the project could consider auditing the accessibility of water points—particularly for the elderly, women who are pregnant, and those with disabilities.

Filtering or Treating Water for Safe Consumption

- None of the households are regularly treating their water - this includes treatments such as boiling, chlorination, and filtration.
- “I think my water is already safe”—this was a common refrain for water collected from water sources understood as ‘improved’ such as springs, taps, and handpumps.
- One woman mentioned that she used a cloth filter to filter water for pond water for cooking—however, it was not clear if this was done frequently or just once in a while.
- **FGDs:** During the FGDs, participants mentioned that the government had previously provided AquaTabs, but there was not a supply chain set up to ensure long-term access. Participants mentioned that the project should pay for water treatment. The team also observed a crate of expired AquaTabs in the local water office.
- **FGDs**: Households mentioned that they prefer “cheaper” options such as boiling, but are not practicing this as the water is already understood as clean.

Storing Water Safely

- Water storage patterns were very similar in Daro Lebu to practices in Kurfa Chele.
- **Observation:** All households had multiple yellow 20L jerrycans which were used both for water collection and storage. At least one jerrycan was stored in the home (the drinking water can) and the others were stored in the kitchen/animal shed. About half of the observed jerrycans had missing lids and most were not very clean.
- One household used a metal kettle to store drinking water in the home, which is seen as a more prestigious vessel.
- Most households also had a large plastic blue barrel for additional water storage. One household was storing water in the large blue plastic barrels from the spring source. Most other households used the blue barrels solely for rainwater. Empty barrels were observed at most households.
- Jerrycans are not washed frequently but are rinsed out before filling to avoid bad smells or algae from forming in the jugs. Some households described using Tanzania Tree leaves which are abrasive and smell nice to help clean the outside of jerrycans. The leaves are also placed inside the jug which is shaken to help remove any residue.
- Water is primarily poured directly from the jerrycans for drinking, cleaning, or cooking.

→ **Idea:** Consider creating a new NCG module on water access, storage, and use.

One household selected this behavior as the one they do frequently that they think is the most important for their baby's health.

Storing Food Safely

- Different than in KC, most households in DL have a separate kitchen hut, which has many uses including dry food storage and animal shed.
- **Observation**: Grains are stored in sacks on the ground in the kitchen hut, but there is limited storage of dry food. We observed limited stored vegetables, spices, or other food inputs. None of the households used shelving or storage systems to keep food safe. Many households rely on food provisions from the World Food Program or USAID.
- Unlike KC, several households did have some leftover food stored between meals. This was done in the cooking pot often left on the firepit and covered with a pot lid.
- In one household, a shelf was visible in the kitchen, but after probing, this was described as for the chickens to roost on at night.
- During the interviews, three households described this as the behavior they were most worried about that they weren't doing and all but one household described this as something they were not already doing.
- **FGDs**: Most participants described that storage shelving with a door is preferable to protect food and other perishables from dust. Plastic shelving was described as for tomatoes and onions—something only stored in urban areas.
- **FGDs**: Participants described that one family in the village (that did not participate in the FGD) had installed mud/clay storage systems which were traditionally used in this area. However, the practice has died out.

→ **Idea**: Explore opportunities to create visuals on the "ideal" kitchen storage room in which this is completely separated from animals.

→ **Idea**: Explore opportunities to promote cooperative mud shelf building—using a similar approach to Zimbabwe.

Three households selected this behavior as the one they aren't doing that they are the most worried about.

Storing, Washing, and Safely Drying Utensils and Dishes

- Most households only have one big plastic bowl for scrubbing, washing, rinsing, drying, and storage. This is stored on the floor in the kitchen.
- Most households have a limited number of kitchen utensils and dishes, that are stored on the floor or stacked in the corner of the kitchen.
- Similar to the safe preparation of food, most interviewed mothers described that they practiced safe washing, drying, and storage of utensils and dishes. This illustrates that there is a large gap between knowledge and practice.

→ **Idea**: Consider co-designing a dish storage and drying rack. The team observed a good example from a restaurant in Badessa.

Preparing and Cooking Food Safely

- Although kitchens are more permanent in DL than in KC (circular huts with thatch roofs), they are also used for storage and animals.
- Most kitchen areas were very dirty and dark, with chickens and goats entering frequently.
- Pots and utensils are not washed quickly after meal preparation and can be left all day without washing.
- Despite the observation of poor practice, nearly all households described that this was a good practice they were doing frequently. Most mothers described preparing and cooking food safely and that this was not a problem for them. However, most families did not have access to meat or vegetables, and, as such, the food preparation was quite simple.

→ **Idea**: Explore opportunities to create visuals on the 'ideal' kitchen space—with particular reference to no animals stored inside with food.

Safe Eating and Feeding

- Nearly all households eat in the main room on the same woven plastic floor mats that are used for daily sitting and sleeping.
- Some toddlers and children are fed in the kitchen as food is being prepared or as they roam around the home.
- Women breastfeed frequently to soothe babies and toddlers and often do not wash their hands or babies' mouths beforehand. This is not always at home, and, as such, there are not always handwashing facilities.
- One of the images in the cards showed a man feeding a small child, and a mother respondent noted, "I wish my husband would feed my baby like this picture."
- Six mothers described this as a safe practice they were frequently doing. One woman described this as a practice that she was frequently doing well, which was the most important for children's health. However, the cards sparked conversations around what entails safe practice and some reflect that there is more that can be done to improve behavior.

→ **Idea**: Consider the promotion of family eating practices as part of the NCG materials.

→ **Idea**: Promote functional handwashing stations for group meetings and at community spaces such as health clinics.

→ **Idea**: Consider the promotion of a washable eating mat made of durable plastic and placed on the floor on top of mats. This is a practice common in urban Haraghe.

One household selected this behavior as the one they do frequently that they think is the most important for their baby's health.

Washing and Drying Household Items Safely

Clothing

- One scrubbing pan is used for most laundry. This is the cut-off top of an old oil barrel and about 4 inches deep.
- Much of the washing of clothing is washed weekly at the water point (stream, tap, or river). Soap is often reserved for clothing. Rainwater is used during the rainy season at the home.
- Some households carry wet laundry back to the home to hang on a line, others spread wet laundry on bushes at the water source.
- Some households have plastic rope drying lines. They are often stored inside so that they don't rot in the sun. One woman described that it was difficult to hang.

Bedding

- Bedding is aired outside on sunny days by placing it on the roof or in the courtyard. To avoid insects like lice, fleas, and bed bugs. This is done more frequently in DL than in KC.

Mats and Floors

- Mats are taken to the river or stream weekly for washing and this is more frequent in DL than in KC. However, taking the mats out to shake them daily or every few days is not much of a practice.
- Indoor floors are swept each morning using a homemade broom of a Tanzanian tree branch. However, as floors are not raised, more dirt is tracked inside.

→ **Idea**: Include cleaning as part of the household cleanliness checklists in the supplementary NCG materials.

Disposing of Garbage Safely

- As most homes in KC have home gardens, compostable garbage is most often thrown on the fields (without composting). This includes animal feces and cooking waste.
- Most households described that plastic garbage is collected and burned when the pile is big enough.
- Liquid waste management remains a problem, especially around water points which are often not properly draining.
- Some households use a rubbish pit that is then used for burning extra waste. One household used a metal barrel to incinerate rubbish.

→ **Idea**: Clarify with the livestock team if there are any risks of using raw waste in home gardens.

→ **Idea**: Review the solid and liquid waste management modules in the NCG materials to contextualize the differences between woreda practices.

→ **Idea**: Work with water user committees to support improved drainage and feces removal practices.

Using Seperate Animal Rooms

- Household kitchens are more robust in DL than in KC, however, they are often used to also keep smaller animals including chickens and goats. There is no separation between animal and human space in kitchen huts. The huts can be locked, which is a useful aspect for keeping small animals safe from night theft.
- One household had a separate chicken house for nighttime, however, we observed chickens going into her kitchen during the daytime while cooking was happening. She was most likely supported by SPIR I with the livelihood poultry value chains.
- Two households described that keeping animals separate from living spaces was something they did frequently, two did sometimes, and the remaining households never did. However, the image to the right shows chickens in the cooking hut even though they had a separate chicken coop (self-reported as frequently practicing). The chickens are allowed to roam into the kitchen during the day and only cooped at night.

→ **Co-design Idea:** Work with the livestock value chain teams to help support better separation of animals and humans and kitchens. Focus on poultry to start.

→ **Idea**: Include the importance of cooping chickens during baby-play time and cooking in NCG materials.

Using Improved Latrines

- All households were using latrines, although unimproved direct pit latrines. Most of these latrines had large cement slabs, provided for free approximately 10 years ago by previous development programming. All the slabs were uncovered. Some of the slabs had been moved to new pits multiple times.
- **Observation**: Latrine superstructures were made of a variety of materials. Some of these superstructures were private and secure, however, some were not private and could limit use.
- Some of the latrines had handwashing stations, but their use was not consistent.
- Water is kept at most latrines but in smaller jugs or plastic kettles. This water is connected to the Islamic requirements of water ablution after defecation.
- Some latrines are potentially too close to the main home structure, which could be a risk of increased contamination.
- Nearly all households mentioned that they are using the latrine frequently, with one mother describing that usage was “sometimes.” One mother described this behavior as the most important for her child’s health.

→ **Idea**: Promote the use of improved latrine components such as SATO or AIM slabs.

→ **Idea**: Ensure that the importance of covering squat holes and cleaning slabs frequently is clear in NCG materials.

One household selected this behavior as the one they do frequently that they think is the most important for their baby’s health.

Disposing of Baby Feces Safely

- Most households let babies defecate openly. This is then collected using hoe, spade, or leaf and dropped in the latrine.
- Two households are using potties—but mostly for older toddlers. Potties showed signs of being recently used and one still had urine in it.

→ **Idea**: Actively promote the use of potties for babies over 8 months. Create linkages between distributors and local market actors.

One household selected this behavior as the one they do frequently that they think is the most important for their baby's health.

Disposing of Animal Feces Safely

- **Observation:** Most compounds had observed raw animal feces in the courtyard (chicken and goat).
- Most feces is mixed (cow, donkey, goat, and cow) during sweeping and thrown on fields, gardens, and fruit trees. This is unlike KC, where different types of feces are separated for different uses. As such, there is much less cow and donkey manure in the home and there was no animal feces was observed in garbage pits.
- All households described sweeping animal waste (cow, goat, chicken, and donkey) in the morning. This job was often done by girls. The small brooms are homemade using Tanzania Tree branches. Some households use their hands to collect the animal feces, others use a hoe.
- One household (of all the visited homes in KC and DL) had both a dog and a cat. This feces is also thrown into the garden.
- In most households, cattle stay outside and are not penned (even sometimes at the farm). Unlike KC, there is less risk of hyenas and families are more comfortable leaving their animals out.
- Donkey feces is often found at the water points and along the routes to water points.

→ **Idea**: Consider adding a household cleaning schedule supplement to the NCG materials. With sweeping of the courtyard multiple times per day.

→ **Idea**: Consider supporting water user committees to manage donkey feces at the water points.

→ **Idea**: Consider working with the livestock team to develop a which poop goes where module to help communicate how best to deal with different types of animal feces.

Using a Handwashing Station

- Most people are aware of low-cost handwashing stations because of long-standing work within the area of other NGOs. However, few families have stationary hand washing stations, and about half of the stationary stations were tippy taps.
- It is possible that the handwashing stations were put out for show, but we also observed households with handwashing stations when driving along the road.
- Just outside the latrine, the most common form of handwashing station was a 3-liter tippy tap. However, most households had a 3L jug of water inside the latrine for anal cleansing. Some households described that they were nervous about leaving jugs outside the latrine because of theft by plastic recyclers.
- One household had a handwashing kettle at the front door - which could be used for washing the hands of guests (as described by children) or for extra water at the latrine (as described by the mother).
- All households were not aware of new products—like Happy Tap, which was described by one respondent as, “maybe a juice machine.” However stationary handwashing stations are commonly seen just outside of restaurants on the roadside.
- Some restaurants also use a metal jug and pan, which is the most traditional form of pre-eating handwashing.

→ **Idea**: Promote indoor handwashing stations using low-cost options.

→ **Idea**: Promote the use of the same jug for handwashing as anal cleansing.

One household selected this behavior as the one they do frequently that they think is the most important for their baby’s health.

Handwashing with Soap

- While soap was only observed at two latrines, the majority of the households did have ash at the latrine. This could be related to a desire to show best practices to visitors, but the ash did look used with fingerprints. Ash is stored in a small plastic bag or broken jug.
- Some households are only using water for handwashing—which was explained as more aligned with religious practices.
- The ash-using households did prefer to use soap, but access was sporadic due to increasing costs. The cost of soap had tripled in the last year—a similar finding to Kurfa Chele. “I have many children, and it is difficult to keep soap in the house, so I end up using ash.”
- Bar soap is reserved for laundry and sometimes washing dishes, which is seen as the more important usage of the limited resource.
- Seven households identified handwashing with soap as a practice that they were frequently doing, however, soap was not observed in five of these households. Three households identified handwashing with soap as a practice that they think is the most important for the health of their children. This illustrates high knowledge, but potentially barriers in attitude and practice.

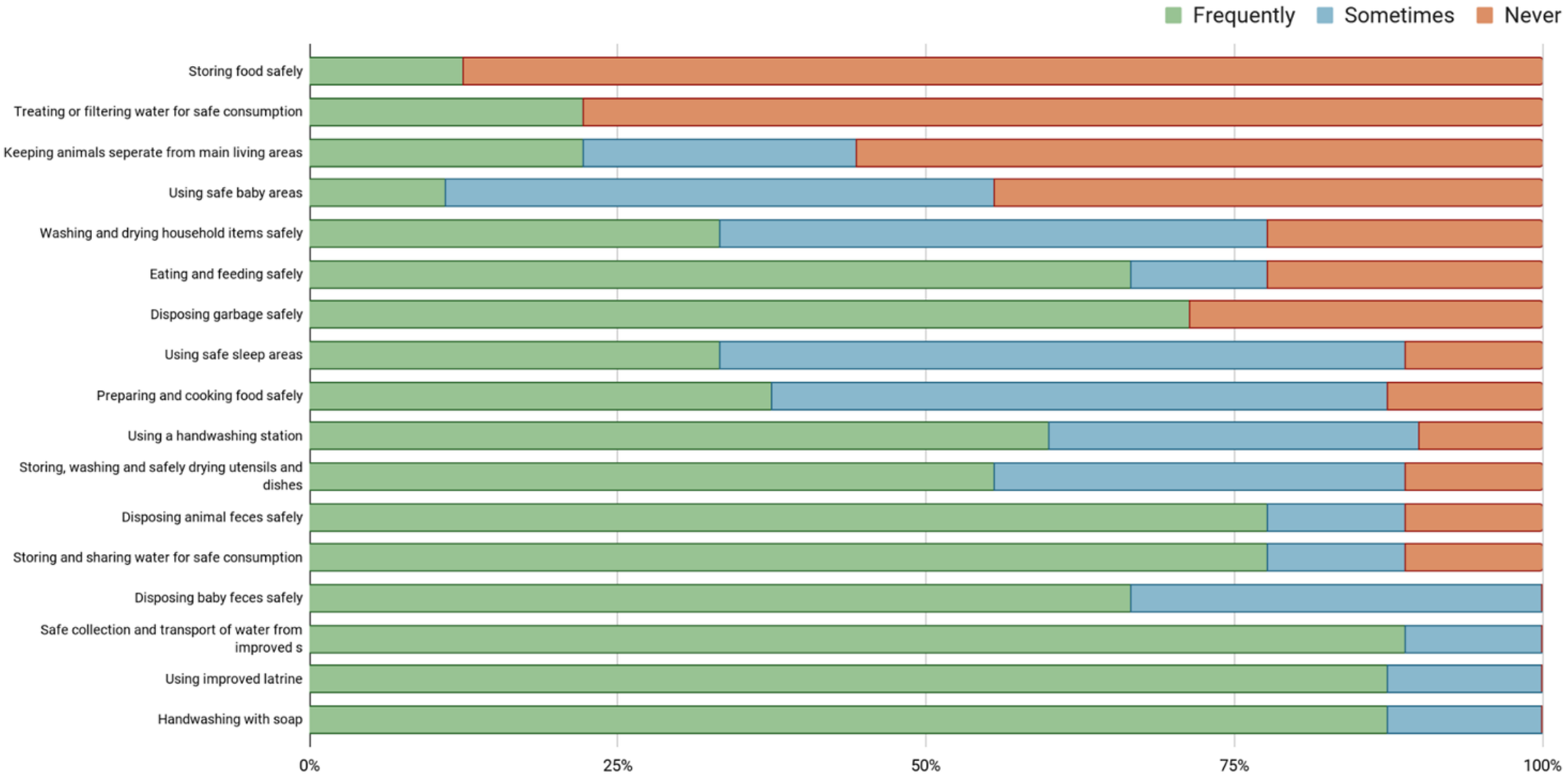
→ **Idea**: Explore opportunities to engage religious leaders to encourage the use of soap during handwashing and ritual cleansing after latrine use.

→ **Idea**: Explore opportunities to market soap at chat markets and as something to buy after selling chat instead of soda or snacks.

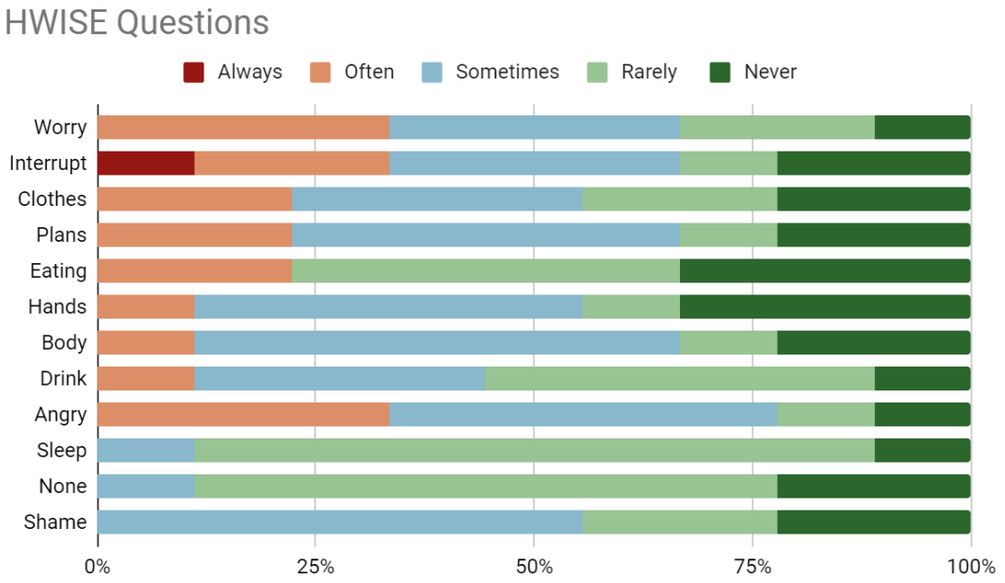
Three households selected this behavior as the one they do frequently that they think is the most important for their baby’s health.

Self-Reported Behavior Frequency Card Sort (n = 9)

As part of the household interviews, we asked participants to sort multi-image cards of 17 behaviors into three piles to explore how frequently they believe are currently practicing this behavior (self-sorted). These were compared with the snapshot in time observational data, which did not always align. Together, the information provided important insights into the extent to which households believed they were practicing this behavior.



Household Water Security (n = 9)

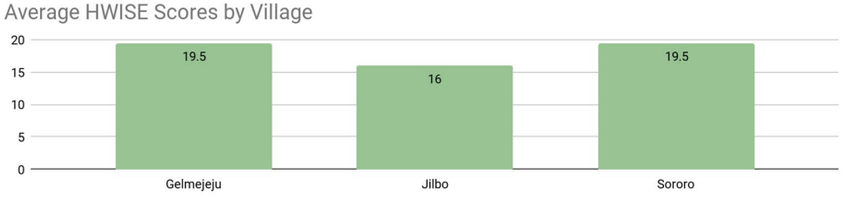


Based on a finding from the Kurfa Chele woreda, the team piloted the Household Water Insecurity Scale (HWISE) in the nine interviewed households. Scores range from 0–36 with scores over 12 being indications of water insecurity.

While all the households had access to improved drinking water, household water security is a more complex measurement reflecting the triage of water for different uses.

Based on this measure seven households were classified as water insecure at the time of the interviews. This was primarily related to the long cue times as water points.

Due to a broken tap, one family was paying for water, taking a small vehicle to the main town and back.



HH	Village	Litres of Collected Water/Household/Day	Liters/Household Size	Water Collection Time (Round Trip Minutes)	Water Collectors	Closest Clinic (one way, minutes)	HWISE Score	Water Insecure
DL-A	Jilbo	120	9.23	60	Children	5	20	Yes
DL-B	Sororo	60	15.00	1	Mother	10	21	Yes
DL-C	Jilbo	80	11.43	15	Mother	5	0	No
DL-D	Jilbo	25	2.27	360	Girl and Mother	5	32	Yes
DL-E	Jilbo	90	8.18	60	Girls	10	16	Yes
DL-F	Sororo	125	17.86	60	Girls	10	18	Yes
DL-G	Gelmejeju	80	8.89	60	Girls	20	17	Yes
DL-H	Jilbo	80	7.27	180	Boy	20	27	Yes
DL-I	Gelmejeju	60	10.00	180	Boy and Mother	15	7	No

Hygienic Products: Insights and Ideas

SECTION 4

This section draws on nine household interviews, 11 FGDs with community members, and five interviews with market actors.

It should be noted that as products and behaviors are closely linked, there may be an overlap in the findings between Sections 3 and 4.

Handwashing Stations

One size does not fit all.

- Similar to KC, households are much more accustomed to handwashing stations post-COVID, however, they are viewed as “for restaurants.”
- Most FGD participants described having a 3L or 5L jerry can with a removable nail (tippy-tap) at the latrine as promoted by previous NGO activities. These were sometimes brought inside at night to avoid theft.
- Inside the home, some households had a cup and bowl that were used as part of ceremonial handwashing with guests.
- Similar to KC, Nearly all households agree that they need two handwashing stations at home: one next to the latrine and one inside the house in the eating area.
- Accessing faucets/taps to add to 20L jerrycans is a challenge in the DL context. Although 20L jerrycans as handwashing stations had been seen by FGD participants in health posts and restaurants, none of the participants had one at home.
- None of the FGD participants had previously seen the Happy Tap which was “maybe a hand and feet washing facility.” The willingness to pay for the Happy Tap is a maximum of 500 Birr, which is seen as a prestigious and fancy item for inside the home. This is less than half the actual cost.

Recommendations

Create BCC/marketing materials that illustrate a range of potential handwashing options as inspiration and ideas. This should also include how they are maintained and where they should be placed. This could also include the use of the right hand for turning on taps/removing nails to reduce contamination and supporting a handwashing station manufacturing session as part of the NCG curriculum.

Encourage small local enterprises to carry spring-loaded taps in rural areas.

Indoor handwashing station: 10L jerrycan with a spring-loaded tap or cup and bowl.

Outdoor handwashing station: 3L jerrycan with a nail attached with a string. Promote the use of the right hand for removing the nail.

Locally available, this plastic kettle is a common feature of households in the Daro Lebu region. They are sometimes stored indoors a night and primarily used for ablution at the latrine.

Cost: 60 Birr

Also locally available, this 3L “tippy tap” has a nail at the bottom with a string that can be easily removed. These are often left outside the latrine for ablution and have be widely promoted by previous NGO work.

Cost: 60 Birr

This form of cup and bowl is a commonly used handwashing device before and after food in wealthier homes and in some restaurants. This practice could be adapted to include handwashing more widely in DL.

Cost: 70 Birr

Water Filtration and Treatment

Interested, but not available.

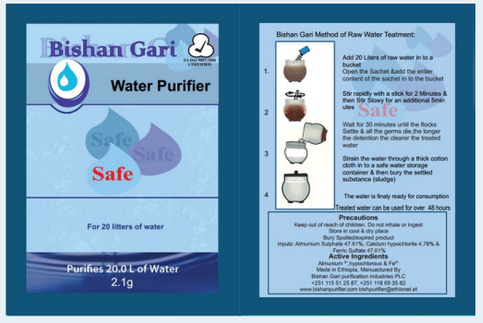
- Most FGD participants noted that the challenge with water is not quality but, rather, quantity. “Our water is safe to drink, and we don’t need a filter.”
- Water filters were not found in any rural market areas or shops and had not been seen or used by any of the FGD participants. “Is it a toilet part?”, “maybe it is for handwashing?”
- FGD participants were familiar with Bishan-gari and Aquatabs which have been previously provided by government agencies but are not always available in the market.
- The team also observed a large quantity of expired Aquatabs at the local Water Office. They were donated by aid organizations, but a lack of transport support meant that the tablets did not reach the community.
- While the concept of the Tulip Filter was widely appreciated (once explained), some FGD participants commented that the plastic could easily break, and ultimately it should be provided for free as other water initiatives.
- Some FGD participants had practiced boiling and cloth filtration previously but only done these sporadically when urged by the government, such as during cholera outbreaks.

Recommendations

Create a stronger value chain for **water filters and purification tablets** with local suppliers and retailers. Leverage these local retailers as promoters and to provide key messaging about the maintenance and upkeep of water filters. Also, ensure that the local retailers stock spare parts - such as the replacement ceramic candles. Explore opportunities for subsidized sales through the local shops where the program can cost-share a small number of filters.

Locally made, this is the cheapest of the water filter options and is the most appropriate for rural households. The simplicity of the design has increased adoption.

Cost: ~1500 Birr



Bishan-Gari Water Purifiers are small sachets of flocculant-disinfectant powder and provide targeted protection against bacteria and viruses. The sachets are locally manufactured in Addis Ababa.

Cost: 5 Birr/sachet

Aquatabs are effervescent chlorine tablets which also provide targeted protection against bacteria and viruses.

Cost: 6 Birr/sachet

Images of the Bishan-Gari and Aquatabs from their respective websites.

Improved Latrine Pans or Slabs

Interested but hesitant.

- In Daro Lebu, improved latrine slabs and pans out of fiberglass or plastic are not currently available at retainers. There is one recently trained WASH Business center owner, but there is still work to be done to ensure that the center can effectively sell and install improved components.
- The sanitation market in Daro Lebu has been significantly impacted by the subsidy (full or nearly full) campaigns by previous development partners. As such, most FGD participants noted a low willingness to invest in their latrines.
- Nonetheless, most FGD participants interested in the SATO pan recognized the value of the pan. It requires only a small amount of water for flushing, blocks bad smells, and reduces fly breeding.
- While nearly all FGD participants noted that they preferred the SATP pan, while, one FGD discussed that the AIM slab may also be valuable, because it is a wider plastic and can be used for bathing more privately.

Recommendations

Link the supply of improved latrine products and services by the WASH Business Centers with the demand created by care group sessions is important to make the system sustainable.

Engage with supply chain actors for the SATO and AIM pan to identify and mitigate supply chain issues.

SATO pan 103 that is available in Dire Dawa by a retailer established by PSI Ethiopia in the Transform-WASH activity. SATO Seats and SATO Flex are also available but have lower demand.

Pans are installed through WASH Business centers into mud slabs at the household.

Cost: 450 Birr, with installation into a mud slab 1,000 Birr

AIM latrine pan made of plastic, available at selected shops in stores in Addis Ababa. The slab features a swinging cover that can be used to improve the latrine.

Cost: 1,000 Birr

“Turkish” latrine pan made of fiberglass, available at hardware stores in Dire Dawa. Does not include a cup-trap or other water seal to make it improved.

Cost: 450 Birr

Safe Baby Spaces

Interested but prioritize the child's comfort

- Mothers prefer the plastic woven mats over vinyl flooring, as the non-woven flooring is not warm and absorbs the cold.
- Most participant FGD households had 4–5 mats per household. Some households had a dedicated mat for kids eating/playing area.
- Mats are cleaned every 3–7 days. Participating mothers noted that babies and small children are dirty and that they should be cleaned more frequently.
- Cement flooring underneath the mats is desirable as it ensures the mats last longer.
- Some families choose to only cement the veranda area of the home to save money and as this is a more convenient and cooler space (as the inside of homes can be hot).
- Some households have seen and used baby mosquito nets, but they are seen as a luxury good and don't last very long as they are difficult to clean.

Recommendations

Encourage local retailers to pre-cut a small section of plastic flooring that can be used as a floor eating mat. This should be durable and easily cleanable. This is because it is difficult for households to be able to afford a bigger piece and the flooring comes in rolls.

Support the practice of daily sweeping or mat beating outside to ensure that mat safety is maintained.

Explore baby playpens that do not include metal and therefore can be easier to wash and maintain.

Plastic tablecloths are available in larger markets and feature bright bold patterns.

Cost: 500 Birr

Vinyl flooring is readily available in rural and urban markets. It is sold on large rolls and not in small enough sections for an eating mat.

Cost: 200 Birr/meter

This pop-up playpen includes a washable floor, short walls, and a mosquito/fly net.

Cost: 20 CHF, brought from Switzerland

Locally known as "Shamashia," this pop-up netting is available in local markets and being used by some mothers for their infants under 8 months.

Cost: 600 Birr


POWER SOURCE PROTECTOR
USB
NICE SOFT
JEMS
LAUNDRY SOAP


4x6
pepsi


USAID