

# PRO-WASH

## Human-Centered Design Guide



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## DISCLAIMER

This document is made possible by the generous support of the American people through the United States Agency for International Development (USAID). The contents are the responsibility of the PRO-WASH Award and do not necessarily reflect the views of USAID or the United States Government.

## OVERVIEW OF THIS DOCUMENT

This document is a compilation of learnings from desktop research, consultation meetings with project stakeholders, and Co-design workshops held with a selection of community members (women, men, Health Extension Workers (HEWs), latrine builders and retailers, religious leaders, and WASH officers) from Amhara (Lalibela) and Oromia (East Hararghe zone) regions of Ethiopia. The learnings also include observations of the context during the Co-design workshops. The information in the document is intended to inform low-fidelity sanitation and hygiene prototypes, which are recommended to be iterated during the implementation phase of the RFSAs. \*The information is not intended to be used as representative research findings. The learnings are intended to provide a basis for low-fidelity prototype development, rather than to be used as representative market research.

## AUDIENCE FOR THIS DOCUMENT

The document is primarily prepared for the USAID-funded Resilience and Food Security Activities (RFSAs), to refine key sanitation and handwashing activities.

# Introduction and summary

## The purpose of this Human-Centered Design Guide

In November 2022, ThinkPlace facilitated two Co-design workshops in Amhara and Oromia regions of Ethiopia. The findings from the workshops will be used by the USAID-funded Resilience and Food Security Activities (RFSAs), to refine key sanitation and handwashing activities and to ensure harmonized and evidence-based sanitation and handwashing interventions. During the workshop, ThinkPlace used Human-Centered Design (HCD) methodologies to build an understanding of the hygiene and sanitation context, cultural practices, and social and psychological influences of hygiene-related behaviors, market-related factors, and corresponding opportunities to address them. The workshop brought together a select group of community members. The community members' selection process was aimed to ensure a representation of each concept's user profile. This HCD Guide contains the learnings from the workshops and guidance on how to further iterate the recommended hygiene and sanitation low-fidelity prototypes using HCD methodology. It is recommended that the RFSAs lead the iterations /adaptations during the implementation period.

## Summary of the workshop and project contexts

ThinkPlace conducted the Oromia Co-design workshop in Harar. The workshop brought together a total of 43 community representatives: women, men, Health extension workers (HEWs) Latrine builders, Latrine materials wholesalers and retailers, representatives from Village Savings and Loan Groups (VSLAs), and Micro-finance Institutions (MFIs) and WASH officers. The workshop participants were selected to ensure a representation of each concept's user profile. The discussions focused on validating five concepts that aim to increase handwashing at the five critical points, use of latrines, and water treatment practices.

In Oromia, East Hararghe zone, the community members are predominantly Khat farmers and are able to earn income from both farming and the sale of this popular cash crop. The community is also highly entrepreneurial with a number of small and medium-sized enterprises – ranging from roadside vendors to *kiosks*, and supermarkets. This indicates that potentially, community members are able to access and pay for hygiene, sanitation, and water treatment products and services. However, we learned during the workshop that in some cases, community members de-prioritize the use of these products and the practice of health behaviors due to negligence - a normalization of poor hygiene and sanitation practices.



ThinkPlace conducted the Amhara Co-design workshop in Lalibela. The workshop brought together a total of 23 community representatives: women, men, Health extension workers (HEWs) Latrine builders, Latrine materials wholesalers and retailers, representatives from Village Savings and Loan Groups (VSLAs) and Micro-finance Institutions (MFIs) and WASH officers – selected to ensure a representation of each concept's user profile. The discussions built on findings from the Oromia workshop, focusing on exploring the differences occasioned by context and exploring deeper the key components of the prototypes that would motivate the uptake of hygiene and sanitation behaviors.



In Amhara, the communities are from a much lower socio-economic status (as compared to Oromia) and therefore affordability is a predominant barrier to the uptake of hygiene and sanitation products. We noted during the Amhara workshop, the presence of a strong Village Savings and Loan Group association (VSLA) network with more than 10,000 currently existing groups. The forums are used as a savings and investment channel for micro-saving groups under the Poultry livelihood value chain. There are existing hygiene and sanitation interventions/messages under the VSLA program. The concepts developed during the workshop also leverage the use of the VSLA groups.

# Introduction to Human-Centered Design



# What is Human-Centered Design?

## Design thinking is a way of looking at the world from a wider lens. Human-centered Design is a method – processes, techniques, rules of thumb - that you use to ‘do’ design thinking.

Human-Centered Design (HCD) is an approach used to improve ‘things’ – products, services, systems – from a user’s perspective. It is about taking a human perspective from the beginning to the end of a change or improvement-focused design challenge.

<sup>1</sup>HCD is grounded in design thinking - a mindset traditionally taught in design school that is fundamental to the operational abilities of designers. Design thinking is an empathetic perspective of the world, where people act as both the central source of direction and the key benchmark of the viability of a solution.

<sup>2</sup> Professor Richard Buchanan has argued that the subject and context of design have undergone a shift from the design of symbols and things, to the design of environments and systems. Buchanan states that as the focus of design has changed, designers have “tried to understand products from the inside – not physically inside, but inside the experience of the human beings that make and use them”.

A traditional design approach involves understanding the problem, developing concepts, prototyping concepts, refining concepts and finally implementing solutions. The premise of HCD is that as opposed to the traditional ways of problem-solving, it leverages the people closest to the problem to become the problem solvers. It invites us to say – we don’t know. It is an anti-expert mentality and requires the Designer to stay humble.

Taking a Human-centered Design approach means adding a human element to each of these steps.

For example, understanding the problem in an HCD project would require actual contact with the people involved in the challenge, to understand their behaviors, motivations, and hurdles. Prototyping would involve taking time to explore, innovate and evaluate concepts or ideas with actual users to see first-hand how they interact with potential solutions. Ultimately, to be human-centered is to consider complex systems from the perspective of the people who will use or be affected by them.

<sup>3</sup> Principles for human-centered design include: the design is based upon an explicit understanding of users, tasks, and environments, users are involved throughout design and development, the design is driven and refined by user-centered evaluation, the process is iterative, the design addresses the whole user experience, and the design team includes multidisciplinary skills and perspectives.

HCD can also be seen as a mindset that can be applied at any stage. It is about empathy, and inclusion, allowing adaptation and iteration of concepts according to feedback, and visualizing processes in a way that gives other people the opportunity to input.

“ The essential part of creating is not being afraid to fail ”

...Edwin Land, Scientist, and Co-founder of the Polaroid Corporation

1. ThinkPlace: A Guide to Co-design; 2014, V1 pg. 3
2. Buchanan, Richard. "Design research and the new learning" Design Issues, 2012, 17 (4): 3-23
3. International Standardisation Organisation, (2010) "ISO 9241-210:2010(en): Ergonomics of human-system interaction – Part 210: Human-centred design for interactive systems.", Retrieved from: <https://www.iso.org/obp/ui/#iso:std:52075:en>

# An Overview of the HCD Methodology



## Research

The process begins with immersion - **understanding the uncertainty**. By harvesting information, the designers start to identify patterns and develop insights.

The research phase is guided by methods and tools that can help the designer to understand both what people say and what they do. The research process requires the designer to allow end-users to express themselves; this gives insight into their lived experiences and therefore a more holistic view of what the problem to solve looks like.

## Concept

After Immersion, the process leads the designer to start to **conceptualize what changes to the system** may look like, generating ideas, developing concepts, rapidly prototyping, testing, and refining - **always with the user at the center**.

The process of testing prototypes, allows the designer to keep doing more research, often in real-life settings. This drives an understanding of exactly what works and what does not work and how to change it.

## Design

This involves the packaging of the final prototypes in formats that can easily guide implementation and scale. It involves a clear definition of the key components of the final intervention and how it adds value. It results in more clarity and focus, a clear way forward with operational requirements in place, and key metrics and indicators for success.

# The HCD Mindset an 'Outside-In' perspective

'Inside out' design makes things and then sends them to users

**We have made it, you should use it**

'Outside in' design explores what the user wants/needs and then makes it

**What will help the user and deliver a good experience?**

## HCD is ...

An 'outside in' perspective: human and user-focused

Driven by the stakeholders and the project's intent

Designing a product or service in conjunction with the system it operates within

Progressively prototyping, testing, and learning

Highly collaborative

Disciplined but flexible

## HCD is not ...

An 'inside out' perspective: expertise focused

Driven by the technological or conceptual solution

Designing a product or service in isolation

Attempting to get a solution correct the first time and then releasing it to the user

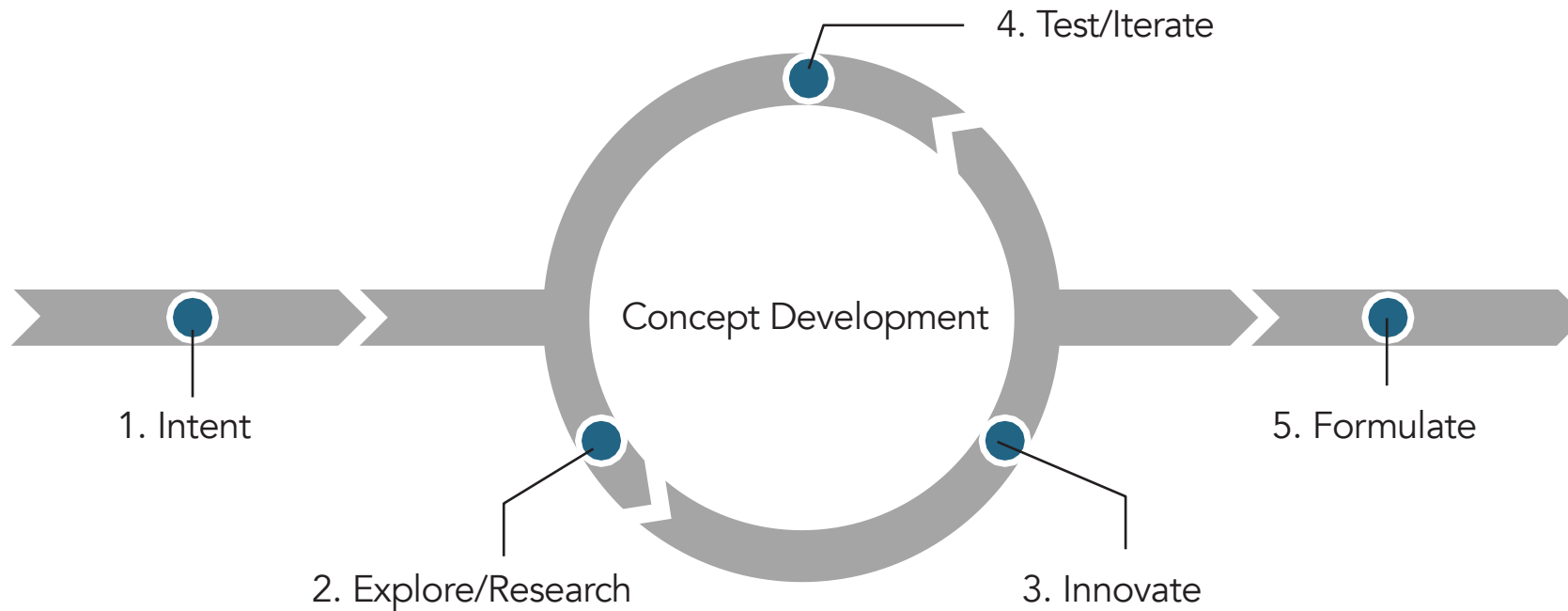
Developing solutions without external input

A rigid and linear process

2. Joseph Giacomin, "What is Human Centred Design?", P&D Design - Research and Development Brazilian Congress, 2012, p. 1

# The stages of a Human-Centered Design process

The HCD process is structured, yet flexible. It involves five distinct stages, however a design project may revisit stages multiple times through successive iterations. In particular, the Research, Innovate, and Testing stages build on each-other to continuously refine and de-risk concepts. At each stage, there are unique considerations, objectives, outcomes and tools that can be used to achieve these outcomes.





# Conducting Human-Centered Design Research

As a HCD researcher, your mindset is crucial because it influences how the interviewee will perceive you, how you phrase questions, and ultimately the quality of the data you bring out. It's important that your mindset is open and humble and that you tolerate ambiguity. As a researcher, you are in a position of power, and therefore need to actively work to be humble. Position yourself appropriately to create a comfortable and emotionally safe situation for the participant and build rapport by accepting refreshments, chit-chatting, and asking the interviewee a bit about themselves.

## Key Points

- Practice leading an interview. Find someone to practice with you before you lead your first interview. Ask them to pay attention to how you are asking questions.
- Ask open-ended questions. Avoid phrasing questions that will result in a 'yes' or 'no' answer where possible.
- Don't ask a leading question. For example, saying "was that challenging?" leads the participant to agree with you. Instead ask: what was that like?
- Take notes, in the participant's words. Avoid paraphrasing or summarising. Capture what you have heard using their words. Write down key quotes verbatim.
- Avoid offering verbal encouragement (i.e. 'yes' or 'good').
- Give the participant 5 seconds following distance from when you ask them a question. Use silence to draw out more information. If after 5 seconds they are having difficulty answering a question, use the prompts in the interview script.
- Notice the 'white rabbits' and follow them up at the end of the interview/session. If there is something that the participant has said that you want to know more about, come back to that point at the end of the interview or the end of the session.
- Take photos of the environment at the end of the interview. Remember to ask for permission first.



## Interviewer's role

- Follow the lead of the interviewee.
- Dig for stories – say "can you tell me more about that?" or "do you have a sense for why that is?"
- Validate what matters most – ask if you've heard it correctly and repeat back what you heard.
- Ask them if they have questions, or points to add, and thank them.
- Speak only 20 percent of the time or 10 mins per hour. Don't fill the silence. Wait 5 seconds.



## Observer's role

- Take lots of notes.
- Write down direct quotes in their language
- Observe the interviewee's context.
- Be aware of non-verbal cues.
- Be quiet, it's confusing for the interviewee if there are two people saying "hmmm" or giving other cues.
- If you have questions, keep them for the end.

# From concepts to prototypes

The design process



# The Prototypes' Design Approach

Leveraging information from desk research and from consultations with the RFSAs, ThinkPlace facilitated a series of Co-creation workshops, aimed at building a better understanding of the hygiene and sanitation knowledge gaps, identifying the priority areas, and developing responsive concepts. This informed the Co-design workshops with end-users. This process is further described below:

## Gathering already existing information and mapping out the knowledge gaps

In July – August 2022, ThinkPlace conducted extensive desk research, and consultations with the RFSAs, aimed at building an in-depth understanding of knowledge and interventions that are currently used across Sub-saharan Africa to tackle sanitation and hygiene challenges.

The desk review explored both the supply and demand-side challenges, drawing from studies examining the impact of community-level interventions including Community-led Total Sanitation and Hygiene (CLTSH), Market-based Sanitation (MBS), and Behavior-change interventions. ThinkPlace further held consultation meetings with the RFSAs, aimed at understanding efficacy and opportunities to improve the existing WASH interventions. The desk review and stakeholder consultation activities revealed key knowledge gaps which guided the subsequent phases of the design process.

## Co-creating the hygiene and sanitation concepts, guided by the priority challenges

In September – October 2022, ThinkPlace held a series of Co-creation workshops with the RFSAs. The objective was to generate ideas for Innovative hygiene and sanitation interventions and further, to build these into concepts that could guide the development of low-fidelity prototypes.

The Co-creation sessions leveraged already existing information, and the RFSAs' previous experience from working in the community and hence, knowledge about the barriers to the uptake of hygiene and sanitation interventions. Nine concepts were developed. These included:

- Latrine Quickstart guide
- CleanHomes savings and Incentive scheme
- Affordable hand-washing products
- Improving sanitation products supply chain
- Improving the hand-washing supply chain through livelihood programs
- Improving house-to-house water treatment programs
- Driving hand-washing during the five critical times
- Access to latrine construction materials
- Improving the water treatment supply chain

## Validating the hygiene and sanitation concepts through Co-design workshops with end-users

In November 2022, ThinkPlace facilitated two Co-design workshops, bringing together participants from Amhara and Oromia regions to validate the concepts and secondly, to design the components of each prototype. ThinkPlace used multiple techniques to prompt conversations during the workshops: 1) Marketplace: Use of local hand-washing and latrine products to illustrate and enhance engagement with the concepts; 2) Concept mock-ups: visual Illustrations used to enhance understanding and prompt discussions around the proposed concepts; 3). Prototype worksheets: used to help the group members to unpack the prototype components.

To analyze the insights ThinkPlace facilitated semi-structured discussions and compared learnings from Oromia and Amhara workshops to unpack and understand the similarities and differences. Five prototypes emerged:

- Latrine Quickstart Guide
- CleanHomes savings and Incentive scheme
- Affordable hand-washing products (three options)
- Driving handwashing at the five critical points
- House-to-house promotion of Ceramic water filters and Aquatab water treatment products (new-to-market products)

The below changes were made to the concepts:

- Access to latrine materials: Dropped due to observed access to SatoPans from local dealers/retailers
- Improving hand-washing through livelihoods: Included as a component of the CleanHomes savings and incentive scheme
- Water treatment product supply chain: This was explored lightly as the preferred products (Ceramic water filters & Aqua tabs) are already in the market (Recommendations provided)

# The Learnings Informing the Prototypes

The below learnings (from desk review, consultation with the RFSAs, and validated during the Co-design workshops) informed the corresponding design challenges and low-fidelity prototypes:

## LEARNINGS I SANITATION

### LATRINE OWNERSHIP IS NOT A PRIORITY

In both regions, despite existing accessibility to latrine products (Satopans, Cement slabs) through retail shops and local masons and the community members' ability to pay (particularly in Oromia), many households do not invest in latrines.

### SOCIAL NORMS DISINCENTIVISE LATRINE USE

While some households own latrines, usage is minimal because it is perceived as acceptable to defecate in the open. Older family members and young children often practice open defecation and feel that this is more comfortable and hygienic as compared to defecating in a closed space (latrine).

### EXISTING LATRINE DESIGNS ARE NOT USER-FRIENDLY

While some households would like to use latrines, there is not enough space in the compound to put up them up. Women in some communities are also not allowed to go out of the household compounds during the day; this means that they are only left with the option to defecate in the open.

### UNFRIENDLY FINANCE OPTIONS DISCOURAGE INVESTMENT

In some cases, particularly in low socio-economic settings where community members have the intention to invest in latrines, the cost of latrine financing is perceived as high. This introduces a barrier to investment in latrine products.

## DESIGN CHALLENGES

How might we create more affordable latrine products that are still durable and meet the communities' preferences and needs?

How might we tackle social norms ingraining open defecation, particularly among elderly community members?

How might we design durable, affordable latrines that give a sense of fresh and clean privacy?

How might we design finance mechanisms channels that will encourage investment in latrine products by PSNP communities?

## PROTOTYPES

[Latrine Quickstart guide | CleanHomes Savings and Incentive Scheme](#)

[Latrine Quickstart guide | CleanHomes Savings and Incentive Scheme](#)

[Latrine Quickstart Guide | CleanHomes Savings and Incentive Scheme](#)

[Latrine QuickStart Guide | CleanHomes Savings and Incentive Scheme](#)

# The Learnings Informing the Prototypes

The below learnings (from desk review, consultation with the RFSAs, and validated during the Co-design workshops) informed the corresponding design challenges and low-fidelity prototypes:

## LEARNINGS | HYGIENE

### ABSENCE OF A DESIGNATED SPACE TO PUT SOAP

Some houses have no designated space where soap is put. Workshop participants reported that they will fail to use soap when washing their hands because they forget where it is was put after the last use.

### HIGH-COST OF SOAP DISINCENTIVISES ITS USE

In both regions, community members reported a preference to use soap for washing clothes and utensils. Handwashing is not a priority, due to the high cost of soap products. In Amhara, the most affordable bar of soap is sold at approximately 14 Birr.

### HANDWASHING IS DRIVEN BY A HIGH PERCEPTION OF RISK

Community members are more inclined to wash their hands with water only. Where soap is used, community members are also driven by the risk of infection. Workshop participants mentioned that the use of soap was more common during the Covid-19 period, but this practice has now significantly reduced.

### PLASTIC BOTTLES ARE SOLD TO EARN EXTRA INCOME

Particularly in low socio-economic settings, community members prefer to sell plastic bottles as a way of earning extra income, instead of using these bottles to construct handwashing stations.

## DESIGN CHALLENGES

How might we design the household spaces to enable strategic placement of soap where it can be easily found when it is needed for handwashing?

How might we design handwashing products that can be easily accessed by community members from extremely poor / PSNP households?

How might we enable the prioritization of handwashing behaviors where there is a low perceived risk of illness or infection?

How might we design durable and desirable handwashing stations using locally available materials?

## PROTOTYPES

**Affordable handwashing products | Driving Handwashing at the five critical times**

**Affordable handwashing products**

**Affordable handwashing products | CleanHomes Savings & Incentive Scheme | Driving Handwashing at the five critical times**

**Affordable handwashing products**

# The Learnings Informing the Prototypes

The below learnings (from desk review, consultation with the RFSAs, and validated during the Co-design workshops) informed the corresponding design challenges and low-fidelity prototypes.

## LEARNINGS | WATER TREATMENT

### LOW-RISK PERCEPTION WHERE WATER IS VISIBLY CLEAN

Community members in some cases fail to use water treatment products when water appears clean. The majority reported that water will only be treated when there is a young child or sick person at home who needs special care.

### THE HIGH COST OF FIREWOOD IS A BARRIER TO BOILING

In the Amhara region, community members particularly from low socio-economic / PSNP households are unable to afford the cost of firewood. The majority of households will prioritize the purchase/ use of firewood for cooking, rather than for boiling drinking water. This presents a key barrier to the practice of boiling water.

### MISCONCEPTIONS ABOUT WATER TREATMENT PRODUCTS

In the Amhara region, there is an existing perception that some water treatment products (Aquatabs) are specifically for people living with HIV. This is a barrier to the usage of this product, despite the fact that it is provided for free.

### SOME PRODUCTS ALTER THE NATURAL TASTE OF WATER

In Amhara, community members reported that some products introduce an undesirable taste which discourages the use of some water treatment products.

## DESIGN CHALLENGES

How might we enable the prioritization of water treatment practices where there is a low perceived risk of illnesses or infection?

How might we enable affordable access to water treatment products?

How might we address existing misconceptions associated with water treatment products?

\*Explore the desirability of water treatment products

## PROTOTYPES

**CleanHomes Savings & Incentive Scheme | House-to-House promotion of water treatment products**

**House-to-house promotion of water treatment products**

**Recommendations**

**Recommendations**



# Overview of the recommended prototypes

Below is an overview of the prototypes developed during the co-design workshop:

- Latrine Quickstart guide: A template or guide on how to build and maintain a latrine that gives the user the flexibility to use local materials that are accessible.
- CleanHomes savings and incentive scheme: A VSLA-based savings and incentive scheme that motivates VSLA group members to earn a re-investment into their poultry business when they install latrines and handwashing stations and keep them clean.
- Affordable handwashing Products: 1) Clay pot handwashing station, 2) Handwashing mix made of leftover pieces of soap. These are low-cost handwashing products that households from extremely poor / PSNP communities can access as a way to ensure the practice of hand-washing with soap.
- Driving hand-washing at the five critical times: A mapping out of 'handwashing hotspots' strategic locations around/close to the house where handwash products can be placed, as a way to trigger the handwashing practice at the five critical times.
- House-to-house promotion of Ceramic water filters and Aquatabs: a household-to-household promotion that improves access to and uptake of ceramic water filters to be used for water treatment.



*Participants in Oromia build out a handwashing prototype, guided by a prototype worksheet*



*Oromia workshop participants during a group discussion to inform a handwashing product*



*Amhara workshop participants engage with handwashing prototypes*



*Demonstration of the SatoPan slabs during the Amhara workshop*

# Understanding the Contexts

Amhara & Oromia



**USAID**  
FROM THE AMERICAN PEOPLE



**PRO-WASH**  
Practices, Research and Operations  
in Water, Sanitation and Hygiene



**ThinkPlace**



# Understanding the Context

## Overview of PSNP Communities

The Government of Ethiopia (GoE), in partnership with international organizations, aid donors, and civil society, decided to supplement the existing reactive emergency food aid system with a longer-term solution for reducing vulnerability to food insecurity, called the National Food Security Programme (FSP). The Productive Safety Nets Program (PSNP)<sup>1</sup> is a core element of the broader program.

The PSNP helps to address the needs of chronically food insecure households in identified famine-prone areas of rural Ethiopia through:

- The predictable provision of adequate food and cash transfers to targeted beneficiary households, thus allowing effective consumption smoothing and avoiding asset depletion.
- The creation of productive and sustainable community assets that contribute to the rehabilitation of severely degraded areas, build resilience to climate-related impacts and increase household productivity. The program also contributes to improved access to social services, such as education and health.
- The use of risk financing mechanisms allows the program to scale up in times of transitory crisis.

The program finances labor-intensive public works, such as building terraced fields on hill slopes to reduce soil erosion and increase water retention and social services infrastructure. Cash is paid for up to five days of work a month per household member, for six months a year, until the recipient households graduate from the program by accumulating an asset and income level that enables them to meet 12 months of food needs and to withstand modest shocks. In addition, about 20 percent of the participating households with members unable to work receive unconditional cash or food transfers (World Bank/United Nations, 2010).

According to the National Sanitation Subsidy Protocol<sup>2</sup> published by the Ministry of Health – Ethiopia in May 2022, social protection schemes (especially the PSNP) are recognized to have been effective in reducing poverty. Ethiopia recorded a sharp decline in the poverty rate from 44% to 27% between 2000 and 2016. Despite the overall reduction of poverty in Ethiopia, there are still an estimated 28 million people (27% of the population) living below the poverty line according to the 2016 Ethiopian poverty analysis report (PDCETH, 2018).

The National Sanitation Subsidy Protocol further indicates that geographically, poverty in Ethiopia is predominantly a rural phenomenon, as the number of poor below the poverty line in rural areas is almost twice as high as in urban areas. Ethiopians in the two lowest income quintiles lived on US\$ 1.3 in rural and US\$ 2.2 in urban areas (adult/day). Therefore, investments in improved sanitation facilities (with the flooring solution costing at least 500 to 1,500 Birr) pose a major challenge to many poor households.

A study by the Ethiopian Health Insurance Agency (EHIA, 2020) on the burden of household out-of-pocket health expenditures revealed that a large proportion of Ethiopian households faces financial hardship when accessing health services. Access to basic sanitation services is a preventative measure to improve public health by reducing the prevalence of diarrheal diseases and other diseases associated with poor sanitation.

1. <https://documents1.worldbank.org/curated/en/893931468321850632/pdf/806220WP0P12680Box0379812B00PUBLIC0.pdf>

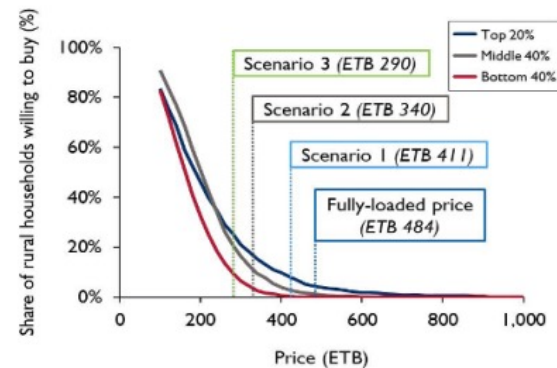
2. [https://www.irwash.org/sites/default/files/national\\_sanitation\\_subsidy\\_protocolEthiopia\\_2022.pdf](https://www.irwash.org/sites/default/files/national_sanitation_subsidy_protocolEthiopia_2022.pdf)

# Understanding the Context

## WASH context analysis in rural areas, among PSNP communities

<sup>1</sup>A USAID-supported assessment, on the impact of the price of plastic pans on the willingness of rural households to pay for such products, highlight the low payment capacity of the majority of the Ethiopian population (WASHPaLS, 2020). The demand curve for three segments of households based on their income indicated that the majority of Ethiopian households are very price sensitive, and demand drops sharply once the price of plastic pans exceeds 200 Birr. For instance, at a price of 400 Birr for plastic toilet pans, demand from the bottom 40% of households is almost non-existent.

Operational data collected by <sup>4</sup>World Vision shows that Wash Business Centers (a one-stop center for the production, distribution, and sale of essential products for constructing WASH facilities) can generate large numbers of sales. However, the gap between market prices and the willingness to pay by the rural poor means careful attention should be paid to ensure a range of products at different price points and financing options. This includes loans and subsidies (either to individuals or enterprises) that need to be considered to make substantial gains toward universal WASH service coverage.



Potential demand for plastic pans by household income segment (WASHPaLS, 2020)

1. [https://www.ircwash.org/sites/default/files/national\\_sanitation\\_subsidy\\_protocol\\_ethiopia\\_2022.pdf](https://www.ircwash.org/sites/default/files/national_sanitation_subsidy_protocol_ethiopia_2022.pdf)
2. <https://aittable.com/app/RLvPI2iYmH19ET/tbIKG044Edpru8Tiz/viwSSPe4iN5aX8ocX/reemMhkrQopEnd8Ne?blocks=hide>
3. [https://www.researchgate.net/publication/363054888\\_Predictors\\_of\\_Hand-Washing\\_Practices\\_at\\_Critical\\_Times\\_Among\\_Mothers\\_of\\_Under-5\\_Years\\_Old\\_Children\\_in\\_Rural\\_Setting\\_of\\_Gedeo\\_Zone\\_Southern\\_Ethiopia](https://www.researchgate.net/publication/363054888_Predictors_of_Hand-Washing_Practices_at_Critical_Times_Among_Mothers_of_Under-5_Years_Old_Children_in_Rural_Setting_of_Gedeo_Zone_Southern_Ethiopia)
4. [https://pdf.usaid.gov/pdf\\_docs/PA00T52M.pdf](https://pdf.usaid.gov/pdf_docs/PA00T52M.pdf)

<sup>2</sup>A market-based sanitation (MBS) Feasibility study conducted by Food for the Hungry (FH) in Amhara, Ethiopia notes that it is common to find households building latrines that will only last a few months because of poor site conditions, materials, and construction methods. When latrines fail, people are discouraged, they may not be able to afford to replace them, and they often revert to open defecation.

Related to hygiene, a <sup>3</sup>study conducted by Dilla University - Ethiopia indicated that hand-washing practices at critical times were low. The pertinent predictors were attitude, the presence of a water source near the household, and the presence of soap. The study concludes that there is a need to encourage domestic hygiene education to improve mothers' attitudes and to increase the availability of water and soap close to the household to promote handwashing with soap and water at critical times. Women are often responsible for household water and so are more conscious of water-related problems and are more willing to pay for improved services (Bogale et al., 2012). The burden of not having access to improved sanitation or adequate hygiene facilities also tends to be felt more by women (and girls).

According to a report by Transform WASH, Private sector sanitation and other WASH enterprises in Ethiopia have made exciting inroads in the past several years. They have introduced new household sanitation, safe water, and hygiene products to consumers, as well as started new businesses and expanded existing ones. In so doing, they have created more employment opportunities and helped move the country toward universal access to basic WASH services. However, the size of most of these operations is still relatively small compared to the scale of the challenge. Businesses still face market hurdles that can limit the growth and profitability of their operations, which increase pricing and reduce availability for consumers.

# Understanding the Context

## East Hararghe Zone represents a vibrant, highly-entrepreneurial community anchored on Khat farming

- **Khat is a major income generating activity:** The majority of the residents earn income from Khat farming, with this region being recognized as one that produces export-quality Khat. This has also led to the growth of intermediaries and aggregator small businesses that have a significant influence on the local economy. Khat farmers will often combine this Khat farming with other income-generating activities. This has spurred the growth of the neighboring locations, with some transforming into 24-hour trade centers.
- **Strong Islamic and historic Influence:** Harar is named the City of Peace and has received the Unesco Peace Prize, as different ethnic and religious groups have lived there peacefully side by side. In the old city center, a Mosque, an Orthodox church, and a Catholic church stand almost side by side. The city bears exceptional testimony to multi-cultural traditions related to Islamic and African roots.
- **Rocky terrain, ponds, and rivers, and semi-arid weather:** Some parts of the East Hararghe zone are rocky and hilly. In some locations, community members report challenges accessing water used for daily use.
- **Presence of educational institutions and activity:** The region has several higher educational institutions including Haramaya University, Horn International college, and the Ethiopian Civil Service College among others. This indicates an opportunity to leverage local capacity to improve the outcomes of the community members in different aspects.
- **Women entrepreneurs:** Women are predominantly involved in the location's economic activities, primarily in the sale of Khat (pronounced "chat" by the locals). Women are also involved in the running of other small businesses such as the sale of spices, clothes and cosmetic products, and foodstuff. This indicates access to income and the capacity to invest in hygiene and sanitation products and services, by women in this community.
- **High use of smartphones and tech skills:** The majority of community members are tech-savvy and own smartphones. This presents an opportunity to utilize smartphones to promote products online.
- **Community engagement:** East Hararghe community members are outspoken, easy to get along and communicate with. This presents an opportunity to engage community members through interpersonal channels such as community dialogues, door-to-door campaigns, and group-based sessions when promoting WASH products.

*\*Contextual analysis represents a high-access location. Prototype Iterations should consider differences that low-access/rural locations.*



*In both Amhara and Oromia, transportation of goods and movement of people is enabled by a highly-connected network of vehicles locally referred to as 'Bajaj'*



# Understanding the Context

## PSNP communities living in Amhara (Lalibela) are involved in public works projects, including the construction of terraces on the region's hilly landscapes

- **Low socio-economic status of communities:** The majority of the community members are from low socio-economic status. This indicates a potential need to tailor WASH interventions in this community with heavy consideration of increasing affordability / reducing the cost of accessing these materials.
- **Communities receive support from PSNP programs:** Some community members participate in public works projects, especially in the construction of terraces found in the region's hilly landscapes.
- **Tourism-related businesses represent some of Amhara's income-generating activities:** Lalibela is known for its distinctive rock-cut churches that date back to the 12th and 13th centuries. These churches are a tourist attraction site and people from all over the world visit to marvel at the structures. In addition to the cash provided under the PSNP projects, some community members earn a living by selling ancient artifacts collected from the churches, and for others traditional wares in the form of textiles and household decorations.
- **The effects of the war:** Revenues from local businesses are affected by the war that broke out between the rulers of the northern region of Tigray and Ethiopia's government forces. Many hotels and businesses were looted and some were destroyed leaving scars of war everywhere. Some of the businesses have struggled to get back to where they were, while some have yet to be able to get off the ground.

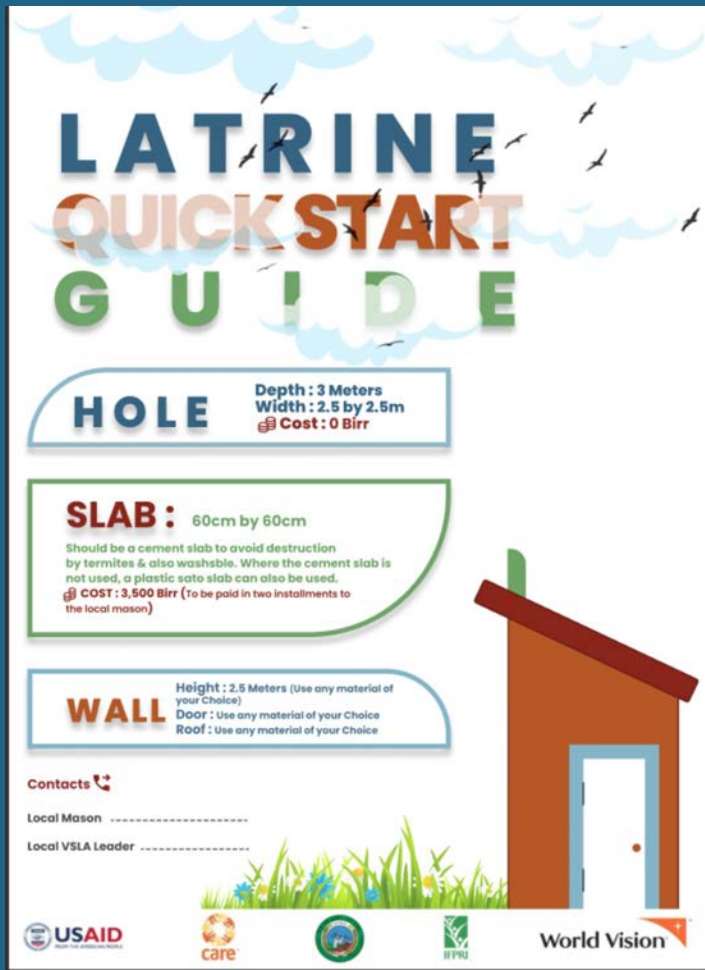


Products are packaged in multiple sizes to allow multiple price points and enable affordability across socio-economic income groups – a key consideration for poor households

*\*Contextual analysis represents a high-access location. Prototype Iterations should consider differences that low-access/rural locations.*

# The Prototypes in detail





# Latrine Quick Start Guide

## LEARNINGS

- **LATRINE OWNERSHIP IS NOT A PRIORITY**  
In both regions, despite the high accessibility to latrine products (Satopans, Cement slabs) through retail shops and local masons and the community members' ability to pay (particularly in Oromia), many households do not invest in latrines.

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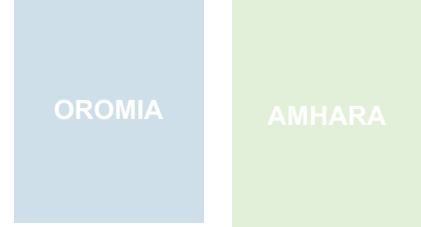
- **SOCIAL NORMS DISINCENTIVISE LATRINE USE**  
While some households own latrines, usage is minimal because it is perceived as acceptable to defecate in the open. Older family members and young children often practice open defecation and feel that this is more comfortable and hygienic as compared to defecating in a closed space (latrine).

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- **EXISTING LATRINE DESIGNS ARE NOT USER-FRIENDLY**  
While some households would like to use latrines, there is not enough space in the compound to put up a latrine. Women in some communities are also not allowed to go out of the household compounds during the day; this means that they are only left with the option to defecate **in the open**.

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- **UNFRIENDLY FINANCE OPTIONS DISCOURAGE INVESTMENT**  
In some cases, particularly in low socio-economic settings where community members have the intention to invest in latrines, the cost of latrine financing is perceived as high. This introduces a barrier to investment in latrine products.



# Latrine Quickstart Guide

## A 'how-to' guide for the construction of durable latrines

**What is it? :** The Latrine Quickstart Guide is a visual flyer that describes the materials that can be used to construct a durable latrine, how to construct the latrine, and associated costs per stage. Community members who construct the durable latrine are able to access the latrine construction services at half the normal cost and are allowed to directly pay the local mason over a two-installment payment plan.

The key components of the latrine design are:

### Durable latrine design (described in the Quick-start Guide):

- **Substructure / Hole:** 2.5 to 3.5-meter depth & 90cm diameter width
- **Slab:** 60cm by 60cm or 1.20 m diameter. Should be a cement slab to avoid destruction by termites and is also washable. A Plastic Sato slab can also be used where the cement slab is not used.
- **Superstructure / Wall:** (use any material of your choice)
- **Door:** (use any material of your choice)
- **Roof:** (use any material of your choice)

### Finance mechanism for the durable latrine:

- **Two Installment-payment to local masons:** Community members will directly pay local masons in two installments. To allow the extension of this benefit to households, the participating group of local masons will receive support from the RFSA as described below:
- **Finance arrangement:** Through the program, the selected masons will receive support in form of:
  - cement (half of the amount required to construct a slab)
  - Working instruments

RFSA can consider a subsidy scheme in which selected masons receive a subsidy in the form of cement or working instruments. This amount should be carefully aligned with other actors, draw on best practices from USAID Transform WASH, and adhere to the National Market-Based Sanitation Implementation Guidelines.

### CEMENT SLAB

Item	Unit Cost (Birr)	Quantity	Total cost (Birr)
Cement	1,600	4	6,400
Sand	0 (locally available)	0	0
Gravel	0 (locally available)	0	0
SATO PAN	250	1	250
<b>Total cost</b>			6,650

### AIM PLASTIC SATO PAN ( SIL AFRIQUE PRODUCT)

Item	Unit Cost (Birr)	Quantity	Total cost (Birr)
Cement	1,600	2	3,200
Sand	0 (locally available)	0	0
Gravel	0 (locally available)	0	0
AIM PLASTIC (SMALL)	480	0	0
AIM PLASTIC (LARGE)	600	0	0
<b>Total cost</b>			3,800 with AIM PLASTIC large/ 3,680 with AIM PLASTIC small

A breakdown of the cost of latrine construction

# The Latrine Quickstart guide

## How does it work?

- Promotion / Communication: The Latrine Quickstart Guide will be used by HEWs when they engage community members during VSLA meetings (once a month). The below information will be included during the discussion.
- Explaining the durable latrine design: This discussion will be guided by the Latrine Quick-start guide.
- Explaining the cost to be incurred by households: The HEW will show the cost incurred at each stage of construction (substructure, slab, superstructure) and the benefit offered through the two rounds of payment directly to the local mason.
- Linkage to local mason: The HEW will provide the contact of the local mason to the VSLA group members and to the VSLA leader who will drive any further communication.
- Enrollment of local masons: The local masons will be selected from the PSNP communities – each Kebele will be served/linked to one local mason. The selected masons will receive training on how to construct a durable latrine and will be informed of the financial support from the RFSA, the promotional support from the HEW, and the extension of benefits to the household, where they are required to provide latrine construction services at half the normal price and allow two rounds of payment.

## How does it add value?

- In Oromia, community members have the ability to pay for latrine products but they do not prioritize the purchase of improved latrines. There is laxity in uptake due to the existing social norms that normalize poor hygiene and sanitation practices such as open defecation, particularly by young children.
- In Amhara, community members have a lower ability to pay for improved latrines, due to a significantly lower socio-economic status. The Latrine Quickstart Guide aims to improve the uptake of latrine services in these communities by:
  - Simplifying communication on how to construct a durable latrine: This will involve showing community members that it is easy to construct a durable latrine. This is done through a simplified/step-by-step procedure demonstrated on the Latrine Quickstart Guide visual. The messaging is championed by HEWs and continued messaging is driven by VSLA facilitators during the group meetings.
  - Small amounts of financial commitment: Providing opportunities to commit small amounts of finances, through an affordable two-round payment plan. This payment is made directly to local masons as compared to through financing mechanisms that would attract additional charges to households in form of interest.
  - Rewards / Sanctions: Currently there are *Afoshas* in the communities who are responsible for ensuring that households construct latrines. The *Afoshas* will also impose a fine when a household is found to be without a latrine.



## Artefacts & Resources



*The Latrine Quickstart Guide visual:* This is an A5 flyer that will be used by HEWs when they facilitate conversations during VSLA group meetings. It is used to demonstrate the cost of installing a durable latrine.

“

...I have installed slabs for 400 households so far...and I even have distributed free slabs for the community so that they adapt it. Additionally, I'm receiving payments in two installments from those who buy my slabs.

”

\_A mason from Oromia workshop

## Recommendations for further testing



### Refining the Latrine Quickstart Guide

The below components of the Latrine Quickstart Guide should be tested in real-life settings, during the implementation period:

- **The content:** The aim will be to ensure the visual flyer **grabs the attention and interest** of community members and **can be easily used by HEWs during the VSLA meetings**. The key questions: 1) What type of information do community members want about an affordable and durable latrine? 2) How can we improve the information linkage to the uptake of the services of local masons ?
- **The financing:** This would focus on validating **the desirability of the payment plans from both the households' and local masons' perspectives**. The key questions include 1) What is the right amount for each installment? 2) What is the right business case for the local masons?
- **The VSLA group discussions:** The aim of iterating this is to ensure the forums **enable discussions that tackle social norms** and existing behaviors related to open defecation. The key questions will include: 1) Which questions can be tackled during the VSLA group discussions? 2) How can the group discussions trigger the uptake of latrine construction services by local masons?

### Testing Tips...

- **Enable interaction with the prototypes:** Rather than explaining the Latrine Quickstart Guide, print out the flyer and present it to masons, VSLA group members, and HEWs, to enable interaction and feedback.
- **Make use of observations:** Look out for both verbal and non-verbal reactions during the VSLA group discussions.
- **Rapid testing and iteration:** Test the prototype (guide and discussion) among a small group of local masons and VSLA groups (e.g 2-3 kebeles) before rolling it out to the wider regions.



### When iterating, remember to...

- Track the shifts in **awareness** of proper hygiene and sanitation behaviors – and if this can be linked back to the VSLA group discussions
- Track shifts in **attitudes** towards improved hygiene and sanitation that can be linked to the VSLA group meetings where the Latrine Quickstart Guide is introduced
- Track improved sanitation **practices** – increased purchase of latrines by first-time owners and increased maintenance of the latrines
- Track increases in slab sales of local vendors promoted

During the testing and iteration phases, we recommend the use of **exit interviews with semi-structured conversations**. This would generate qualitative feedback (including stories, quotes, and pictures/demonstration/explanation of how community members independently adapt the prototype ) guided by the key questions outlined on this page.



# CleanHomes Savings & Incentive Scheme

## LEARNINGS

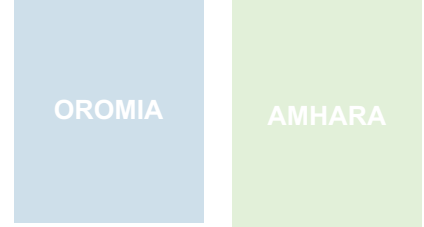
- **LATRINE OWNERSHIP IS NOT A PRIORITY**  
Some households de-prioritize the purchase of latrines or latrine products despite being able to pay for them. In some communities, despite the accessibility to latrine products through retail shops and the community members' ability to pay, many households do not invest in latrines.

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- **SOCIAL NORMS DISINCENTIVISE LATRINE USE**  
While some households own latrines, usage is minimal because it is perceived as acceptable to defecate in the open. Older family members and young children often practice open defecation and feel that this is more comfortable and hygienic as compared to defecating in a closed space (latrine).

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- HANDWASHING IS DRIVEN BY A HIGH PERCEPTION OF RISK**  
Community members are more inclined to wash their hands with water only. Where soap is used, community members are also driven by the risk of infection. Workshop participants mentioned that the use of soap was more common during the Covid-19 period, but this practice has now significantly reduced.



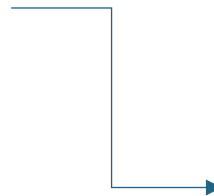
# CleanHomes Savings and Incentive Scheme

## VSLA-based Incentive Scheme

**What is it?** The CleanHomes Savings & Incentive scheme allows VSLA group members to contribute money that will be channeled towards the construction of durable latrines (described in the Latrine Quickstart Guide) as well as motivate continued use of the latrines, through an incentive scheme. Under the Incentive scheme, the VSLA group members are required to have a latrine constructed within/ close to the household, and to keep it clean. These two aspects will be verified by the VSLA group leader during periodic house visits, upon which the household will be eligible for re-investment under the livelihood intervention.

### How does it work?

- The CleanHomes Savings and Incentive Scheme would be introduced into the already existing VSLA groups. Currently, there are more than 10,000 VSLA groups in Amhara and Oromia. The VSLA group meetings take place twice a month and during each meeting, participants contribute money (20 Birr) which is channeled to poultry investment (Livelihood program).
- The CleanHomes Savings and Incentive scheme will be an additional topic during the VSLA group meetings. The HEW will provide information to the group members about the durable latrine and finance model. The VSLA leader will thereafter conduct house visits to verify that the group members have a clean latrine, used by household members.



### How does it add value?

Currently, there is an existing intervention in both Amhara and Oromia under the Village Savings and Loan Associations (VSLA). Community members from PSNP Households meet twice a week and contribute money. The group's contributions are channeled towards investment in poultry, under the livelihood programs. The CleanHomes Savings and Incentive Scheme leverages the VSLA groups as a platform to motivate community members to prioritize the purchase of latrine products over other items as well as incentivize sustained usage of the latrines. The CleanHomes savings scheme tackles this by:

- Information dissemination: During the VSLA group meetings, the HEW will bring up for discussion, the currently existing negative attitudes and behaviors towards hygiene and sanitation. This will aim to move communities beyond a general awareness of the importance of handwashing to shifting their attitudes towards healthy hygiene behaviors. The key messages will include:
  - Positioning the cost vs benefit of practicing healthy hygiene and sanitation behaviors: This will include a demonstration of the cost of poor hygiene behaviors as compared to healthy hygiene behaviors. For example, a comparison might include the budget spent to the treatment of potential illnesses resulting from poor hygiene and sanitation, such as diarrhea vs the cost of soap.
  - Highlighting the risk of illnesses among children: This will include clear communication of the impact of poor hygiene on children's broader health and development. The HEW will explain to group participants the potential negative effect of poor hygiene on children's health: 1) Missing school due to illnesses such as diarrhea, 2) Missing play due to illnesses, which is also a part of the healthy development of children.
  - Introducing opportunities to earn small but meaningful rewards: This is linked to the continued usage of latrines, where a family 'earns' a handwashing station or soap upon demonstration of consistent use of a latrine. This practice will be verified by VSLA group leaders when they conduct periodic house visits.

“ ...people don't wash their hands. I would say it is because of negligence ”  
 \_Health Extension Worker

# Artefacts & Resources



*CleanHomes Handwashing Guide:* This is an A5 foldable card used by HEWs when they facilitate conversations during VSLA group meetings. A fully developed Handwashing guide will contain key messages on the risk of poor handwashing behaviors.

## Recommendations for further testing



### Refining the CleanHomes Savings & Incentive Scheme

The below components of the CleanHomes Savings & Incentive Scheme should be tested in real-life settings, during the implementation period:

- **The Incentive scheme:** The iterations will aim to better understand and refine how the poultry re-investment motivates first-time installation and separately, sustained use of the latrines and handwashing stations. The key questions/ line of inquiry include 1) How does the re-investment into the poultry businesses motivate sanitation and hygiene behaviors? 2) What are the right components that motivate households to keep the latrines clean? 3) How willing are group members to contribute more money, which would go towards the incentive scheme?
- **The home visits:** Iterations under this component would focus on refining how the VSLA Leaders can accurately verify the presence of latrines and sustained use, at the household level. This accurate verification determines eligibility for re-investment through the poultry value chain. The key questions/line of inquiry will include: 1) How might the VSLA leader verify frequent latrine use by household members?

### Testing Tips...

- **Generate insights through stories:** Consider the use of diaries/journals that VSLA leaders can carry during home visits. The journals would contain prompts to guide the collection of human-interest stories that can inform iterations on the incentive scheme and home visits.
- **Experimentation:** Test the prototype among a small group of VSLA members and compare the outcome, over a period of time (at minimum, six months) with those who do not have any incentives under the livelihoods program.



### When iterating, remember to...

- Track shifts in **awareness** of the risks of poor hygiene and sanitation, on household members – and if this can be linked back to the VSLA group discussions.
- Track shifts in **attitudes** toward improved hygiene and sanitation – and if this can be linked back to the VSLA group discussions.
- Track improved sanitation **practices** – sustained use of latrines and handwashing stations; seen through the presence and maintenance of clean latrines by households – and if this is motivated by the re-investment into the poultry business.

During the testing and iteration phases, we recommend collecting evidence of improved sanitation practices (presence of a clean latrine and handwashing station) combined with exit interviews with semi-structured conversations about motivations for a household's installation and use of latrine.





# Affordable Handwashing Products

## LEARNINGS

- **HIGH-COST OF SOAP DISINCENTIVISES ITS USE**  
In both regions, community members reported a preference to use soap for washing clothes and utensils. Handwashing is not a priority, due to the high cost of soap products. In Amhara, the most affordable bar of soap is sold at approximately 14 Birr.

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- **HANDWASHING IS DRIVEN BY A HIGH PERCEPTION OF RISK**  
Community members are more inclined to wash their hands with water only. Where soap is used, community members are also driven by the risk of infection. Workshop participants mentioned that the use of soap was more common during the Covid-19 period, but this practice has now reduced.

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- **SOME COMMUNITY MEMBERS USE LOCAL LEAVES TO WASH HANDS**  
In some cases, community members use local leaves (Lanternia Camara – locally known as *Of kolloh*) as a soap substitute. When rubbed on hands, it produces bubbles which provide the user with a sense of having cleaned hands, similar to when soap is used.

# Affordable Handwashing Products

## Handwashing mix

**What is it?** A handwashing liquid mix made of locally available and easily accessible materials. The handwashing liquid is made of small pieces of leftover soap that are collected and put in boiling water and stored in a recycled plastic bottle.

**How does it work?** This handwashing product can be easily accessed by low-income households, therefore supporting the practice of handwashing with soap. To ensure the usage of the product at the five critical moments, the below components will be included as part of the intervention:

- Information dissemination during VSLA group meetings: HEWs will be invited to VSLA group meetings once a month. During the sessions, the HEW will share information on the need for consistent use of the handwash liquid during the five critical moments. The aim of the information sharing during the group meetings will be to shift the communities' attitudes from negligence to embracing consistent handwashing. The key messages will include:
  - Self-efficacy: The HEW's engagement sessions should aim to show community members the different options of easily accessible and affordable handwashing products.
  - Priming: The HEW will use visual tools that show how to wash hands correctly and the areas that are often missed during handwashing.
  - Cost vs benefit analysis: The HEW's messages should demonstrate the potential risks of not washing hands: risk of the additional cost of medication and children missing school due to illnesses such as diarrhea.

**How does it add value:** People are already aware of the benefits of hand-washing, however, this awareness does not translate to the actual practice of hand-washing, particularly during critical moments. This prototype intends to tackle this challenge by:

- Introducing locally available and easily accessible handwashing products: The use of handwashing liquid made of left-over pieces of soap can be done by most people in the community.
- Handwashing messages: including communication about the importance of handwashing during the five critical times to complement the use of the handwashing liquid. This is through the use of attractive flyers that would be placed on the handwash bottles.
- Supporting quotes:
  - "Previously, people used to share soap with neighbors, but now, it is more expensive, so people are not willing to share soap" \_group participant.
  - The majority of households understand the need but are negligent. "In some cases, people will not wash hands with soap before eating but will do so after the meal" HEW

“...previously, we used to share soap with neighbors but now, this is not possible

” \_Woman



# Affordable Handwashing Products

## Clay pot hand washing station

**What is it?** Two options of handwashing locally available products: 1) Handwashing container made of clay and attached to a piece of low-cost left-over soap (Ajax – most affordable bar soap brand) 2) Sato-tap: a new handwashing product, soon to be introduced in the market.

**How does it work?** The clay pot handwashing container, accompanied by a piece of soap is designed to enable handwashing as described below:

- Clay pot: Clay is locally available in Amhara, therefore the majority of households are able to easily access it. The pot will contain a hole that can be closed/opened using a stick or plastic pen. The cost of this handwashing station is approximately 14 Birr (cost for the soap/Ajax).
- Sato-tap: The product is currently not available in this market. Workshop participants expressed interest in using the product; noting that it looks innovative. The participants also noted that it might trigger handwashing behaviours if households are required to purchase the product. (\*Requires additional market testing to further understand desirability)
- Left-over soap: The majority of households are able to afford an unbranded bar soap (Ajax), which is sold at a cost of 14 Birr. This is a multipurpose soap and left-over pieces can be used for handwashing.
- Placement: The clay-pot handwashing station & soap is placed at strategic locations where household members can easily access it. These locations are strategic to where activities related to the five critical points are. These include 1). Next to the latrine 2). Entrance to the eating area.
- Reminder message: A visual description of the five critical handwashing moments. This is placed on walls.

**How does it add value?** : While community members are aware of the benefits of handwashing with soap, in some cases, the practice does not take place because soap is expensive and therefore unaffordable. Where it is available, there is no designated space where soap is put in the household. This means that even where a household member wants to use soap to wash hands, they may not be able to easily find it. An existing barrier to the construction of handwashing stations is that some households prefer to sell plastic containers (commonly used to construct tippy taps) to re-cycling companies, as a way of generating extra income. For example, a 500ml water bottle is sold for 2 Birr, while edible oil containers are more expensive. This also disincentivizes the construction of handwashing stations using plastics that are easily available. This prototype tackles these challenges by:

- Introducing the use of non-plastic materials to construct handwashing stations
- Including strategic handwashing station placement points within the household

“ ...Sato taps look innovative, so it might increase uptake if they pay for it\_ ”  
 \_Health Extension Worker

## Artefacts & Resources



**A handwashing mix:** This contains pieces of left-over soap which are put in boiling water and stored in a plastic bottle. This handwash mix can be easily made at home.



**A clay pot:** This pot is made locally by women. Old unused pots can be re-cycled as storage containers used to hold water used for handwashing.



**Communication materials:** This is an A5 flyer used as reminder/prompts for handwashing. They are placed within the household and on/close to handwashing stations.

## Recommendations for further testing



### Affordable Handwashing Products

The below components of the affordable handwashing products should be tested in real-life settings, during the implementation period:

- **Desirability and accessibility of the handwashing products:** This involves building a more in-depth understanding of the desirability and affordability of these handwashing products, among PSNP households. The key questions include; 1) What is the cost of access to the proposed handwashing products? 2) What are the opportunities to further improve affordability and uptake of the handwashing products (including exploring households' motivation for investment through the CleanHomes savings and incentive scheme)
- **Community engagement:** This involves building an in-depth understanding of the right messages to use when introducing the handwashing products to communities during VSLA group meetings. The right messaging would aim to position the handwashing products' affordability and benefits. The key questions: 1) What is the cost of access of each proposed handwashing product? (monetary & non-monetary) 2) What triggers consistent use of the products during handwashing?

### Testing Tips...

- **Explore the cognitive drivers of purchase:** Beyond the cost element, what else influences the purchase / home-made preparation of the proposed affordable handwashing products?
- **Explore variations across socio-economic groups:** Test the 'for-sale' prototypes (Sato taps and soap) among different socio-economic groups of community members, to provide an understanding of the barriers to uptake and corresponding iterations.



### When iterating, remember to...

- Track shifts in **awareness** of the options of affordable and easily accessible handwashing solutions – and if these can be linked to the VSLA group conversations.
- Track shifts in **attitudes** toward improved handwashing practices - and if this can be linked to the VSLA group discussions
- Track improved handwashing **practices** – sustained use of the proposed affordable handwashing solutions at the household level.
- Track the **type of handwashing products** that are currently being used in the intervention locations.

During the testing and iteration phases, in addition to **exit surveys**, we recommend collecting **information (pictures)** on the type of handwashing products used in the majority of PSNP households and the cost of access (monetary and non-monetary). This builds holistic evidence on the affordability of affordable handwashing product.



# Driving Handwashing During Critical Times

## LEARNINGS

- **ABSENCE OF A DESIGNATED SPACE TO PUT SOAP**  
Some houses have no designated space where soap is put. Workshop participants reported that they will fail to use soap when washing their hands because they forget where it is was put after the last use.

---

- **HANDWASHING IS DRIVEN BY A HIGH PERCEPTION OF RISK**  
Community members are more inclined to wash their hands with water only. Where soap is used, community members are also driven by the risk of infection. Workshop participants mentioned that the use of soap was more common during the Covid-19 period, but this practice has now significantly reduced.

---

- **HIGH-COST OF SOAP DISINCENTIVISES ITS USE**  
In both regions, community members reported a preference to use soap for washing clothes and utensils. Handwashing is not a priority, due to the high cost of soap products. In Amhara, the most affordable bar of soap is sold at approximately 14 Birr.



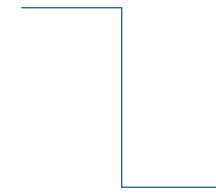
# Driving handwashing at the five critical times

## Mapping out the handwashing 'hotspots'

**What is it?** This involves the promotion of the installation of handwashing stations (Clay pot & Ajax leftover soap in Amhara or Handwashing mix) at strategic places within households and communities as a way to trigger handwashing at the five critical times.

**How does it work?** During VSLA meetings, the HEW will encourage the group members to install handwashing stations within the household compounds, as a pre-requirement to receiving seed investment for poultry, under the Livelihoods program. The key messaging included in these groups is described below:

- Set-up of handwashing stations at strategic places: this involves setting up handwashing stations at strategic places in the household compounds where household members are able to easily access them at critical points. The strategic locations are 1) Entrance/gate of the main house (living) room, 2) Next to the cooking area 3) Next to latrine.
- Reward: Inclusion of a handwashing station as part of the prerequisites to receiving seed funding and poultry support under the Livelihoods Program. The presence of the handwashing stations within the households would be verified by the VSLA group facilitators who often visit their group members in their homes. During the meetings, where they will check the presence of a handwashing station and a poultry house.
- Information dissemination: HEWs will be invited to group meetings to provide health messaging – at least once a month. Beyond awareness, the key messages would focus on shifting the community members' attitude from negligence to acknowledging the need for handwashing at the five critical times. To motivate this shift, the messages will include:
  - **Priming:** The HEW/VSLA group facilitator will use visual tools that show how to wash hands correctly and the areas that are often missed during handwashing.
  - **Cost Vs benefit analysis:** The HEW's messages should demonstrate the potential risks of not washing hands: such as the risk of the additional cost of medication and children missing school due to illnesses such as diarrhea.
  - **Use of reminders:** These will be A5 posters placed at strategic points within the households, where they could prompt the practice of handwashing. These would contain messaging on the five critical handwashing points.



**How does it add value?** Currently, people are already aware of the benefits of handwashing with soap, but the practice does not often take place. The reasons for not washing hands are:

- Low perception of risk: some households will only prioritize handwashing when caring for a sick person or child, or if there is the risk of exposure to contagious diseases such as Covid
- Constrained access to a handwashing station and product: Some household members are likely to wash their hands if the soap is placed at easy-to-reach places. Making it convenient to access soap seemed to be a possible enabler for handwashing practice
- High cost of soap/unaffordability: Some household members are likely to de-prioritize handwashing with soap (only use water) because of the perceived high cost of soap. Soap will be used to wash utensils and clothes, rather than hands

# Driving handwashing at the five critical times

## Mapping out the handwashing 'hotspots'

This prototype will aim to trigger the installation of handwashing stations by:

- Placement of the handwashing stations: installation of handwashing points in the household where people can easily access both soap and water.
- Use of rewards/incentives: this is through the introduction of a pre-requisite within the existing Livelihood interventions, where-by to qualify for poultry investment support, the VSLA group member will need to have installed a handwashing station and bought a piece of soap (the recommended piece of soap being Ajax as it is the most affordable).
- Handwashing messaging triggers: this is through the use of cost vs benefit analysis, social validation, and handwashing prompts.

“

...during Covid, many people had handwashing stations; but they have stopped

”

\_Health Extension Worker

## Artefacts & Resources



The cooking area as a designated handwashing station hot spot: This is next to the cooking area. A handwash mix can be tied on a string and hung on the shed's pole.

The entrance to the house as a designated handwashing station hot spot: Household members spend a considerable amount of time outside the house. Having this as a strategic station may motivate usage.



Handwash mix: This contains pieces of left-over soap which are put in boiling water and stored in a plastic bottle. This handwash mix can be easily made at home.

## Recommendations for further testing



### Driving Handwashing at the five critical times : Mapping out handwashing 'hotspots'

The below components of the hotspots mapping should be tested in real-life settings, during the implementation period:

- **Hotspots at household and community levels:** This involves building a more in-depth understanding of where the right locations at both household and community levels should be. This understanding would guide the installation of handwashing stations in locations that are easily reachable and as a result, make handwashing activity a default. The key questions include 1). Where are the easy-to-access locations at the household and community level where handwashing stations can be easily accessed?
- **The communication triggers:** This involves building an understanding of the communication stimuli that can lead to handwashing activity. The key questions/ line of inquiry include 1) What type of handwashing prompts are preferred and where should they be best placed? Probe: the critical moments? The handwashing steps? 2) What type of messages are most likely to result in handwashing activity? Probe: The risks of poor handwashing practices? The handwashing practices of other community members? The religious expectations?

### Testing Tips...

- **Observations in real-life:** This involves an exploration of the impact of handwashing station placement at communal spaces and households where people gather for social activities - what triggers handwashing activities at these points.
- **Experiment & rapid iteration:** This involves the comparison of different user groups and how exposure to the handwashing stations triggers choice to wash hands or not.



### When iterating, remember to...

- Track improved hand washing **practices** at the five critical times – and if this can be linked to the location of the handwashing stations.
- Track the increased number of handwashing stations that are present within / close to a household.

We recommend the use of **exit interviews with semi-structured conversations** to generate qualitative insights on the handwashing triggers. The conversations would be guided by the discussion questions outlined on this page. The approach to this research should be experimental – where exit interviews are conducted among a small group of participants who have installed handwashing stations. Findings would be compared with a group that has not been exposed to strategically-placed handwashing stations.





# Water-treatment products house-to-house promotion

## LEARNINGS

- **LOW-RISK PERCEPTION WHERE WATER IS VISIBLY CLEAN**  
Community members in some cases fail to use water treatment products when water appears visibly clean. The majority reported that water will only be treated when there is a young child or sick person who needs specialized healthcare.

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- **THE HIGH COST OF FIREWOOD IS A BARRIER TO BOILING**  
In the Amhara region, community members particularly from low socio-economic / PSNP households are unable to afford the cost of firewood. The majority of households will prioritize the purchase / use of firewood for cooking, rather than for boiling drinking water. This presents a key barrier to the practice of boiling water.

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- **MISCONCEPTIONS ON WATER TREATMENT PRODUCTS**  
In the Amhara region, there is an existing perception that some water treatment products (Aquatabs) are specifically for people living with HIV. This conception is a barrier to the usage of this product, despite the fact that it is provided for free.

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- **SOME PRODUCTS ALTER THE NATURAL TASTE OF WATER**  
In Amhara, community members reported that some products introduce an undesirable taste which discourages the use of some water treatment products.

# House-to-House Promotion of Water Treatment Products

## Ceramic Water Filters & Aquatabs House-to-house Promotion

**What is it?** This is a door-to-door community outreach activity done by health extension workers (HEW) or Nurturing Care Group Volunteers (NCGVs). During the house visits, the HEW will meet with the household heads and demonstrate the methods of water treatment: 1) How to use a ceramic water filter, 2) How to use Aquatabs

**How does it work?** This prototype leverages already existing house-to-house interventions conducted by HEWs or Nurturing Care Group Volunteers (NCGVs). Part of the house visits will include raising awareness on the need for water treatment and a demonstration of how to use the ceramic water filters.

**How does it add value?** Currently, some communities have no consistent access to a supply of water treatment products and technologies. This means that while households are aware of the importance of water treatment and want to practice it, they are limited by the unavailability of water treatment products. The house-to-house water treatment intervention tackles this by:

- **Use of locally available water treatment materials:** The house-to-house campaign leverages ceramic water filters which are locally available and affordable at a cost of (1200 Birr) and the practice of boiling of water.
- **Information dissemination during house-to-house community outreach:** During the house visits, the HEWs will share information on the need for consistent water treatment. The aim of the information dissemination activities will be to increase awareness of the need for continuous water treatment at all times both when the water is visibly dirty and when it appears clean. The below key messages will be included during the house-to-house visits:
  - **Consistent water treatment practices:** Community members should treat water at all times, (either through ceramic water filters or the practice of boiling water) both when the water appears clean and when it is visibly dirty.
  - **Demonstration:** The HEW/VSLA Facilitator/NCGV will use the WASH water treatment module to demonstrate how to boil water correctly.



Local water treatment products

# Improving the water treatment products supply chain

## Considerations for designing a water treatment supply chain

### Distributors Level

- Identify distributors of Ceramic filters and Aquatabs water treatment products.
- Involve the project in facilitating permission for the distributors to be able to provide the products. This is because the project regulates how much suppliers can charge consumers for products. This would help the end users to access the products at a lower cost than if suppliers were to dictate the costs.
- Distribution will be done along particular routes to ensure they are available in different areas.

“ ...I only boil water when my child is sick ”

\_Woman

### Retailer Level

How might we motivate retailers to support the distribution of Ceramic filters?

- Proactively creating demand for the use of Ceramic filters and Aquatabs by community members, therefore, encouraging the suppliers to stock Ceramic filters and other different water treatment products to give people options.
- Giving marketplace opportunities to retailers to encourage the sale of water treatment products. This could be in the form of providing them with sheds where they can stock and sell the products.
- Utilize the Health Development Army to drive demand for water treatment products. The HDA is a network of community members who can inform other members of the community of the need to treat water, and possibly where they can get the products. This would create a demand for the products which would in turn attract sellers to stock a variety of water treatment products.

### Household Level

How might we motivate household heads (women & men) to invest in water treatment products?

- Awareness creation. This would take the form of HEWs, CBOs, and other organizations promoting the treatment of water before drinking it. Informing them about where to find them would also make it easy for them to know that the products exist. This would encourage women to treat water before drinking.
- Promotion of Aquatab water treatment products in the community.
- This will be done by leveraging existing government structures such as the Woreda health Office, HEWs, and HDAs to promote the use of Aquatabs for water treatment.
- Recognize people who are using Aquatabs as models so that neighbors also desire to use similar or alternative products.
- House-to-house visits by HEWs can help promote the use of Aquatabs and other water treatment products.
- Informing people during public gatherings in the community can help to promote the use of water treatment products, especially men who are not usually found in the houses during house-to-house visits.

## Recommendations for further testing



### House-to-house promotion of water treatment products

The below components of the hotspots mapping should be tested in real-life settings, during the implementation period:

- **The desirability of the water treatment products:** The objective would be to understand the communities' attitudes and perceptions towards the Ceramic water filters and Aquatab products. We recommend allowing select households to use/experience the new product for a few days and thereafter provide feedback on the experience. The key questions include: 1) What was your experience with the product? Probe on: 1) Cost of product, 2) Ease of use 3) What value did it provide? 4) What can be improved?
- **Efficacy of the water treatment products supply chain:** This will involve setting up targeted interviews with Aquatabs and Ceramic water filter product suppliers and households to build a more in-depth understanding of the supply chain. The key line of inquiry should include: 1) What are the key barriers to access of the Aquatabs and Ceramic water filters by PSNP households?
- **Iterating the door-to-door campaign:** This will involve exploring opportunities to improve the existing door-to-door intervention, with a view to motivating the uptake of (the desirable) water treatment products and practices at the household level. Key question: 1). What influences the use of water treatment products?

### Testing Tips...

- **User testing:** Provide the product to select households to use for a few days (3-5 days). Conduct follow-up interviews to understand the experience of the product from different perspectives: household head, person in charge of cooking / treating water and the household members.
- **Data collection tools:** Household diaries/journals to collect real-time experiences of the household members when interacting with the product.



### When iterating, remember to...

- Track shifts in **awareness** of the importance of water treatment – and if this can be linked to the house-to-house promotion.
- Track shifts in **attitudes** towards water treatment; with a focus on consistent water treatment at all times before consumption.
- Track improved water treatment **practices** at the household level – linked to the use of ceramic water filters and water treatment products such as Aquatabs.

To collect evidence and insights on the shifts in awareness, and attitudes, we recommend the use of **exit interviews with semi-structured conversations** to generate qualitative insights into the motivations for water treatment. The conversations would be guided by the discussion questions outlined on this page. Tracking evidence on improved water treatment practices can be done through examining presence of water treatment products within the household.

# Bringing it together

The Behavior-change pathway



## Bringing it together **The Behavior Change Pathway**

For successful behavior change to occur, it is important to go beyond the assumption that if people know what is good for them and are aware of the negative effects of what they do, they will adapt accordingly; or that if the availability of a service is communicated, it will generate demand for it. Social and Behavior Change acknowledges that human decision-making is much more complex; people are emotional and influenced by their context, especially by those they live and interact with. What is happening around them matters as much as what they think about themselves (UNICEF, 2019).

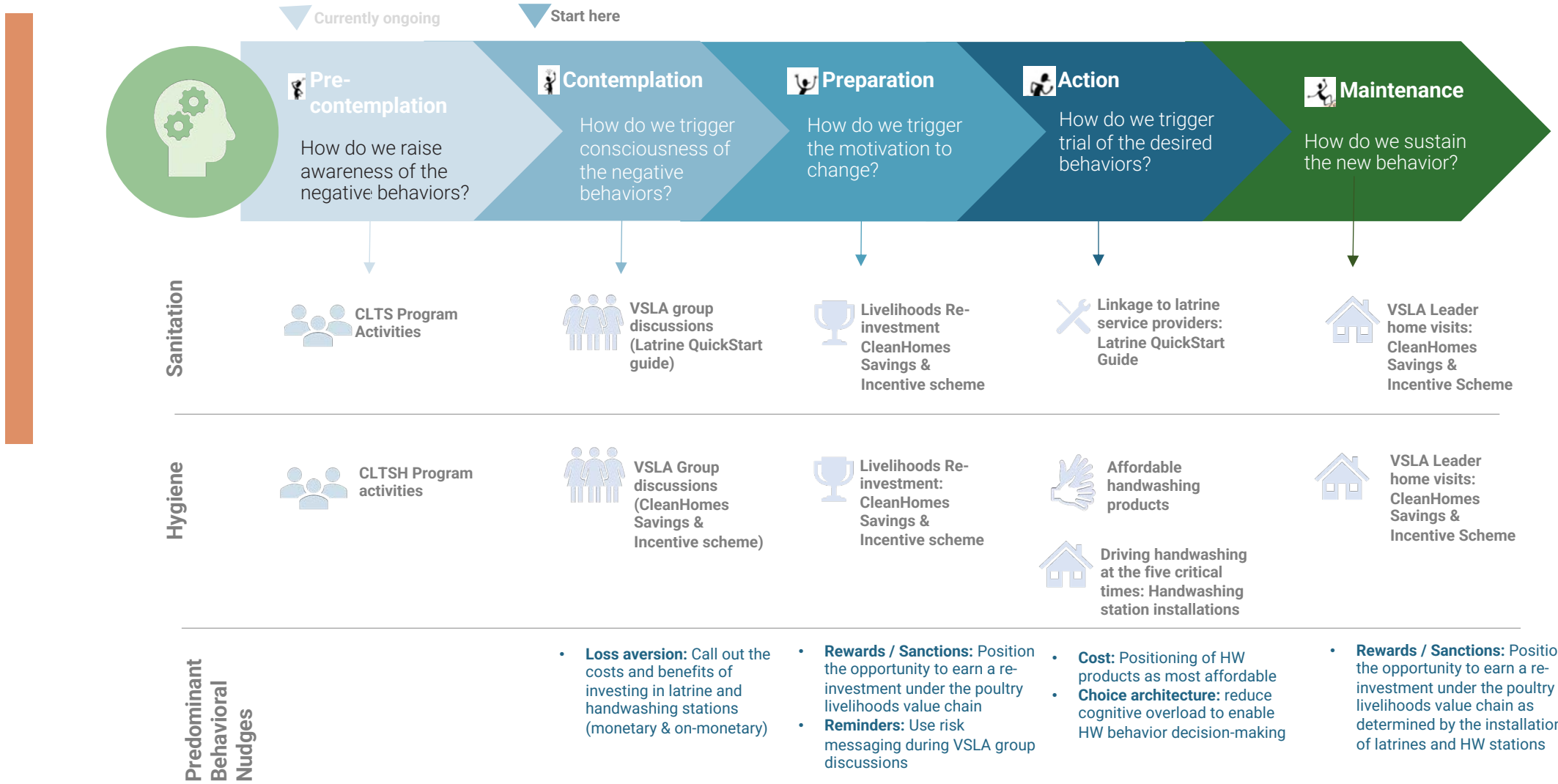
To develop a criterion for categorization and analysis of the impact of the recommended prototypes in shifting hygiene and sanitation behaviors, we have used the Stages of Behaviour Change / Transtheoretical Model. This model posits that people move through five stages of change: pre-contemplation, contemplation, preparation, action, and maintenance. For each stage of change, different intervention strategies are most effective at moving the person to the next stage of change and subsequently through the model to maintenance - the ideal stage of behavior.

In the following page, we map out the prototypes along the Stages of Behavior change framework. Learnings from the workshop indicate that while people are aware of hygiene and sanitation challenges (analyzed in the desktop research and consultation workshops) the interventions should primarily focus on the 'contemplation, preparation, action, and maintenance stages.





# Bringing it together The Behavior Change Pathway



## Refining the Pathway through an Iterative Approach

The Research, Innovate, and Test stages of a HCD process may be visited several times throughout a project in successive iterations. Each iteration builds on the previous to continuously develop and refine prototypes. The number of iterations visited in a project is generally constrained by budget and time - however more iterations will generally produce a more refined and tailored outcome. The below considerations should inform each iteration:

### What are the gaps in our knowledge?

Identifying the gaps in knowledge about the prototypes requires us to be humble and to admit that, because we are not the users, we do not know everything about them. The research conducted in the first iteration will be the most comprehensive and exploratory. Each successive iteration may require some additional user research to find out specific details, opinions, perspectives or motivations as knowledge gaps arise during the concept development.

### What assumptions have we made from the outcomes of the previous iteration?

Assumptions can be considered as gaps in knowledge that we have enough relative information about to make informed inferences. Identifying assumptions at the beginning of each iteration is important because it prevents the designer from basing design decisions on information that may not be correct. The purpose of testing is to prove or disprove assumptions.

### Create an Integrated approach weaving in both supply-side and demand-creation interventions

Ensuring accessibility of hygiene and sanitation products is essential to all of these WASH behaviors. This calls for an integrated approach to ensure communities have the resources that allow them to practice desired behavior. This will be combined with the promotion of services and the knowledge/skills and motivation to do so.

### To shift behaviors, focus on the underlying motivation of the end-users

Beyond providing information, important to integrate into the communication activities' motivation/benefit. Determine the end-users motivation by always focusing on the deeper-level influences, for example, a need for social validation, avoid a loss, etc.

### Capacity building of local researchers and local

Train facilitators who are fluent in the local language and understand the context well, for example, the RFSA field office and WASH staff. This will be a way to ensure continuous adaptive learning.

