



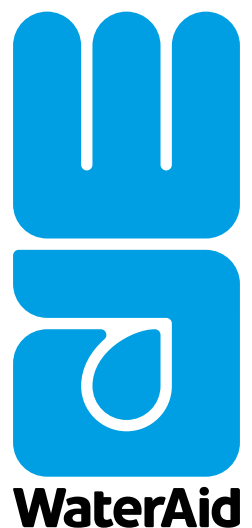
WaterAid/Genaye Eshetu

# Developing and costing national Hand Hygiene for All roadmap

Experiences and learnings from Ethiopia



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## Authors

- Mr Abireham Misganaw, Acting Head of Advocacy and System Strengthening, WaterAid Ethiopia
- Dr Om Prasad Gautam, Senior WASH Manager – Hygiene, WaterAid UK
- Ms Sophie Hickling, Senior Policy Analyst – Hygiene, WaterAid UK
- Ms Ellen Greggio, Programme Advisor – Monitoring and Mapping, WaterAid UK
- Mr Yared Tadesse, Water, Food and Hygiene National Coordinator, Ministry of Health

## Editorial team

- Ms Ella Lines, Editor – Policy, Practice and Advocacy, WaterAid UK
- Dr Om Prasad Gautam, Senior WASH Manager – Hygiene, WaterAid UK

● Front cover: Tigist washes her hands at the new taps at her school, Amhara, Ethiopia. November 2018.

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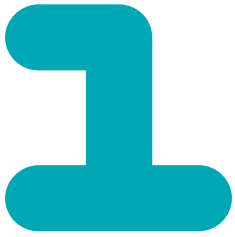
# Acronyms

<b>ABCDE</b>	Assess, Build, Create, Deliver and Evaluate	<b>MoWE</b>	Ministry of Water and Energy
<b>BCD</b>	Behaviour Centred Design	<b>NGOs</b>	Non-Governmental Organisations
<b>CLTSH</b>	Community Led Total Sanitation and Hygiene	<b>N4G</b>	Nutrition for Growth
<b>GoE</b>	Government of Ethiopia	<b>O&amp;M</b>	Operation and Maintenance
<b>HCFs</b>	Healthcare facilities	<b>OWNP</b>	One WASH National Programme
<b>HEP</b>	Health Extension Programme	<b>PPP</b>	Purchasing Power Parity
<b>HH4A</b>	Hand Hygiene for All initiative	<b>SDG</b>	Sustainable Development Goals
<b>HSTP</b>	Health Sector Transformation Plan	<b>SOP</b>	Standard Operation Procedure
<b>IPC</b>	Infection Prevention and Control	<b>TSEDU</b>	Total Sanitation to End Open Defecation and Urination
<b>LDCs</b>	Least Developed Countries	<b>TWG</b>	Technical Working Group
<b>MoF</b>	Ministry of Finance	<b>WASH</b>	Water, sanitation and hygiene
<b>MoH</b>	Ministry of Health	<b>WHO</b>	World Health Organization

▼ Habtamu, student and sanitation minister of the WASH club, washes his hands at a new tapstand at his school, Amhara region, Ethiopia. January 2021.



WaterAid/Genaye Eshetu



# Global context

**Good hygiene behaviours, supported by clean water and sanitation, help prevent the transmission of pathogens and diseases, and keep people healthy. With good health, children can go to school, adults can work, and people can live dignified lives. Consistently practising good hand hygiene is a key preventative behaviour for several diseases.**

The COVID-19 pandemic has further highlighted the importance of good hygiene practises, particularly handwashing with soap, to prevent the spread of infectious diseases. However, it has also shone a light on the impacts of water, sanitation and hygiene (WASH) inequalities and the fact that not everyone has soap and water to wash their hands. Around 2.3 billion (three in ten) people, 30% of the world's population, do not have a place in their homes to wash their hands with soap and water.<sup>1</sup> Half of healthcare facilities (HCFs) globally do not have hand hygiene facilities at toilets or points of care.<sup>2</sup> 40% of schools do not have a basic hygiene service and 25% have no service at all. This means 802 million children lack a basic hygiene service at their school, including 480 million whose school still have no hygiene service.<sup>3</sup> This puts teachers, doctors, nurses, patients and all of us at risk.

Washing hands with soap and water is one of the most cost-effective public health interventions. Frequently washing hands with soap and sustaining those practises will have multiple benefits including reducing infections, disease burden and outbreaks, which in turn can improve school performance and increase productivity. It is estimated that US \$12.2–15.3 billion over 10 years is needed for universal hand hygiene in household settings in the 46

least development countries (LDCs) of which US \$4.9–6.6 billion (42%) is for behaviour change promotion interventions, and the remainder is for facilities and supplies, with soap the biggest cost category (36%), followed by handwashing facilities (13%) and water (9%).<sup>4</sup>

COVID-19 triggered the establishment of the Hand Hygiene for All initiative (HH4A), providing a once-in-a-generation opportunity to build momentum on the importance of WASH, particularly hand hygiene. HH4A is a global initiative led by WHO/UNICEF in partnership with key organisations, including WaterAid. HH4A brings together national governments, partners, the public and private sectors, and civil society, to ensure affordable products and services are available – especially in disadvantaged areas – and to create an enabling environment for hygiene. The HH4A initiative promotes the development and use of costed, government-led national roadmaps to achieve hand hygiene for all by 2030.

WaterAid, in collaboration with WHO/UNICEF, is currently engaging several countries to support the roadmap development, costing and tracking process. An essential element of the roadmap development process is detailed costing, which allows governments to plan and allocate funding and advocacy, making the case for investing in WASH.

This case study outlines Ethiopia's experience in the development of their costed country hand hygiene roadmap with development partners including WaterAid. The intention is that the case study report will help other countries' government and development partners to take lessons and use the costing tools for their customised costed roadmap.

1. WHO/UNICEF (2021). *Progress on household drinking water, sanitation and hygiene*. Available at: [washdata.org/reports](https://washdata.org/reports) (accessed 14 Apr 2023).

2. WHO/UNICEF (2022). *Progress on WASH in health care facilities 2000–2021: special focus on WASH and infection prevention and control (IPC)*. Available at: [who.int/publications/i/item/9789240058699](https://who.int/publications/i/item/9789240058699) (accessed 25 May 2023).

3. WHO/UNICEF (2022). *Progress on drinking water, sanitation and hygiene in schools: 2000-2021 data update*. Available at: [who.int/publications/m/item/progress-on-drinking-water--sanitation-and-hygiene-in-schools--2000-2021-data-update](https://who.int/publications/m/item/progress-on-drinking-water--sanitation-and-hygiene-in-schools--2000-2021-data-update) (accessed 25 May 2023).

4. Ross I, et al. (2021). Costs of hand hygiene for all in household settings: estimating the price tag for the 46 least developed countries. *BMJ Global Health*. vol 6, no 12. Available at: [gh.bmj.com/content/6/12/e007361](https://gh.bmj.com/content/6/12/e007361) (accessed 14 Apr 2023).



# Ethiopia's status

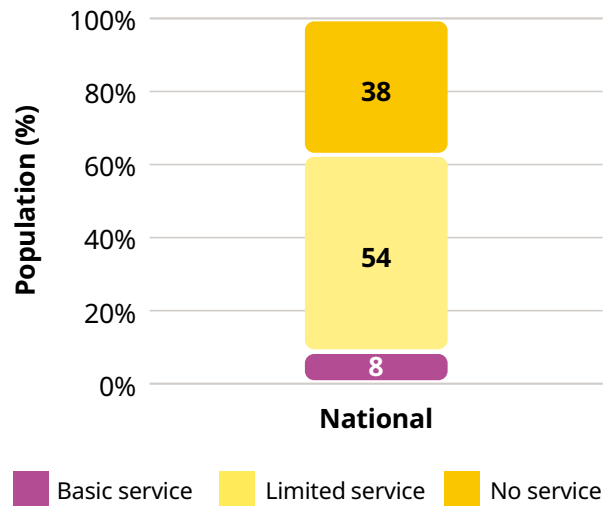
**In Ethiopia, it is estimated that 92% of the household population, 42% of HCFs, 84% of primary schools, and 71 % of secondary schools lack a basic handwashing facility with water and soap.<sup>5</sup>**

Approximately 80% of those who don't have access to soap and water live in rural settings and are among the most vulnerable groups: families living in informal settlements, migrants, refugee camps and areas of active conflict – more than half of that percentage is children.

Despite concerted efforts of the government and development partners, basic hygiene practices is hugely lacking in Ethiopian households. As little as 8% have a handwashing facility with soap and water at home and 54% have a limited handwashing facility, which lacks either soap or water, at home.<sup>6</sup> More worryingly, progress is stagnant and at current rates, only 8% of people in Ethiopia will have basic hygiene access at home by 2030. For everyone in Ethiopia to have basic hygiene access at home by 2030, the current rate of progress would have to accelerate by 131 times. A transformative shift in progress and investment is urgently required.

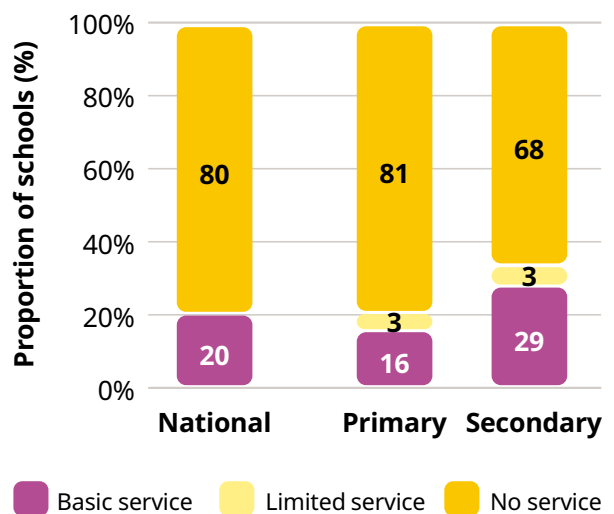
The Ethiopia WASH Financing Working Group report showed that Ethiopia needs US \$17.6 billion to achieve WASH Sustainable Development Goals (SDGs) of which US \$3.7 billion is available with a US \$13.9 billion gap.

**Figure 1: Household hand hygiene status, UNICEF/WHO Joint Monitoring Programme, 2021, Ethiopia**



\* Basic service: Availability of a handwashing facility on premises with soap and water.

**Figure 2: School hygiene status, UNICEF/WHO Joint Monitoring Programme, 2021, Ethiopia**



\* No basic service estimate available.

\*\*Basic services: Handwashing facilities with water and soap available at the school at the time of the survey.

5. WHO/UNICEF (2021). *Progress on household drinking water, sanitation and hygiene*. Available at: [washdata.org/reports](http://washdata.org/reports) (accessed 14 Apr 2023).

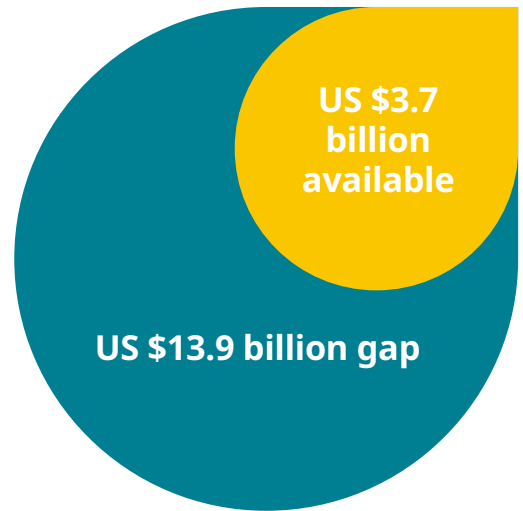
6. WHO/UNICEF (2021). *Progress on household drinking water, sanitation and hygiene 2000-2020: five years into the SDGs*. Available at: [washdata.org/reports](http://washdata.org/reports) (accessed 14 Apr 2023).

Ethiopia received US \$1.652 billion between 2010 and 2019 from external finance for WASH. This is 4.03% of the total external finance received in this period. For WASH, the water sector received the highest share as per the OWP budget distribution formula.

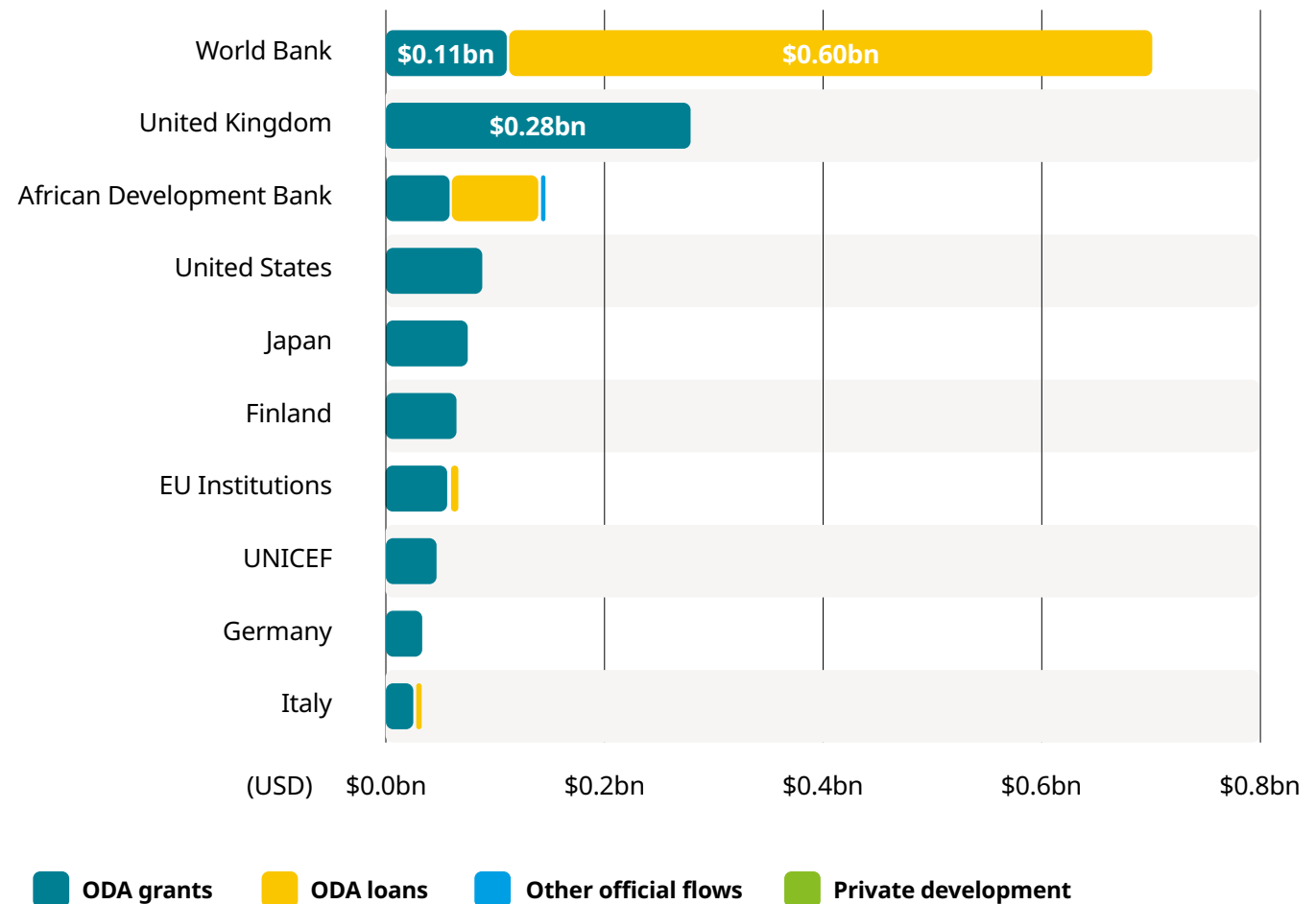
While many challenges exist, such as low budget allocation from the government for WASH and the absence of WASH financing, opportunities have arisen after COVID-19.

Whilst there was previously no separate budget for hygiene, the more precise estimates, and financing arrangements included in the HH4A roadmap costing will allow for more effective decision-making. Enhanced political commitment and sector engagement, increased private sector engagement and HH4A initiatives have driven efforts.

**Figure 3: Ethiopia SDG budget estimate for SDG and Gap, Ethiopia WASH Financing Working Group report**



**Figure 4: Source of WASH funding between 2010–19, Ethiopia WASH Financing Working Group report**







## Purpose of the case study

**Ethiopia is one of the first countries to develop a fully costed roadmap for achieving universal access to hand hygiene and it is hoped that the lessons learned can add to sector knowledge and aid other countries following a similar process in their contexts. This case study aims to document the process, approach and lessons from developing and costing a national Hand Hygiene for All roadmap and the role of Government and partners in developing and costing the roadmap.**

In addition to detailing the wider process of roadmap development, this document examines the process of using detailed hygiene costing data collection and costing estimate tools. Developed by WaterAid, these tools are used to cost hygiene-related activities, including hardware for households, HCFs and schools, hygiene behaviour change (HBC) activities in all settings and government staff costs.

As a result of the costing process, Ethiopia has detailed costed plans against which government can allocate, plan and budget for hygiene over 10 years including infrastructure, HBC, government staff cost and repetitive maintenance. The overall goal of the hand hygiene roadmap is to ensure universal access to handwashing facilities and services to achieve a culture of hand hygiene among all Ethiopians by 2030.

The learning from the costing process using WaterAid detailed tools can be used to validate the high-level costing tool developed jointly by WHO and UNICEF, through a consultancy with WASH Economics and its default assumptions.

### ▼ HH4A launching, Arba Minch, Ethiopia.



### ▲ HH4A roadmap development group discussion.

# 4

## Ethiopia roadmap development

### 4.1. Approach

For the development and the costing process of hand hygiene roadmap, different approaches were implemented by the Government in partnership with WaterAid, and various other partners. Consultations were conducted with other partners including WHO, UNICEF, WaterAid, and others on the HH4A initiative and Ethiopia's next step to respond to the global call.

After the consultation session, ministerial-level lobbying events were conducted to provide ownership for the Ministry of Health (MoH). Under the Government ownership, the technical working group was revitalised from different sectors and partners in which WaterAid assumed the secretariat and facilitation role.

Under the leadership of the Government, multiple consultations, development and costing sessions took place to review different studies and prepare a conceptual framework, milestones, activities and indicators.

After the development and costing of the roadmap, ministerial and official level consultations were conducted to get final feedback, guidance and endorsement. After the ministerial endorsement, global financing presentations were facilitated by WaterAid, and launching events were conducted.



● Tsehaynesh Yashaw washing her arms, performing her ablutions in Frat, Ethiopia. February 2020.

WaterAid/Joey Lawrence



## 4.2. Process

Figure 5: Graphic presentation of HH4A roadmap development process, Ethiopia, 2022

# 2020

- The national HH4A roadmap was initiated after the global HH4A initiative launched
- Ethiopia starts small brainstorming consultations partners including WHO, UNICEF, WaterAid and others on HH4A

# 2021

- Ministerial-level lobbying and discussions were conducted
- Federal MoH owns the initiative
- The MoH revitalised and chaired working group in which WaterAid Ethiopia takes the facilitation role and support overall development process
- Multiple consensus-building and scoping meetings were conducted with all stakeholders
- With desk review and situational analysis conceptual framework designed
- Detailed milestones, objectives, targets and activities are prepared in three phases i.e. response, rebuild and redesign
- Multiple versions of the roadmap were prepared and consulted with wider stakeholders
- After the final version is prepared, costing and financing exercise begins, where WaterAid also supported as key partners
- Ministerial-level and WASH sectors senior management and director level discussions were conducted for further enrichment
- After costing and financing exercise, final roadmap was designed, proofread and printed as well as presented in different global meetings, including AfricaSan meeting, Nutrition for Growth (N4G) summit, AMCOW and WA global advocacy working group for further advocacy and financing

# 2022

- After WASH sectoral and MoH endorsement, different communication materials such as, roller banners, stickers, leaflets and bags were prepared
- WaterAid support printing, launching and brief note preparation
- Launching brief and full roadmap is available here: [wateraid.org/et/publications/hand-hygiene-for-all-hh4a-roadmap](https://wateraid.org/et/publications/hand-hygiene-for-all-hh4a-roadmap)
- The roadmap was launched in the presence of Ministers, WASH sectors management team, OWNP co-ordination office, subnational sectoral counterparts, donors and development partners
- Ethiopia experiences and learnings case study paper prepared

# 5

## Lessons from the roadmap development process

### 5.1. Lesson 1: Government leadership

Ethiopia's HH4A national roadmap – which cuts across multiple sectors – was developed through the leadership of the MoH with strong engagement of other sectors and stakeholders. For the HH4A roadmap development process, the MoH revitalised the HH4A development technical working group and in the development process, WaterAid Ethiopia served as facilitator and secretariat.

At the initial phase of the development process, the Ministry of Water & Energy, Ministry of Education, Ministry of Finance (MoF), and One WASH National Programme (OWNP) were engaged and participated under the overall leadership of the health sector. During the development process, there was clear leadership that was able to engage across sectors.

After the hand hygiene roadmap document was prepared, the MoH also provided leadership for the costing process. Multiple sectors were engaged, including education, the water development commission and the ONWP, in data preparation for baseline, preparing sector targets, and reflecting on potential financial sources for the roadmap. Based on the data, WaterAid spearheaded the initiative and organised different workshops and meetings for the costing process.

Along with WaterAid, other non-governmental stakeholders such as UNICEF also supported the roadmap development process from initiation to finalisation, including technical contributions during consultative workshops and costing.



▲ Meseret Wale, Director of Gena Mechawecha Health Centre, washing his hands using a handwashing facility which is constructed by WaterAid at the health centre, Gena Mechawecha Town, Amhara Regional State, Ethiopia. April 2022.

“Having MoH (Ministry of Health) leadership, [combined with] MoWE (Ministry of Water and Energy), MoE (Ministry of Education) and MoF (Ministry of Finance) engagement in the development and costing process is key to the roadmap being owned across sectors. Processes were very participatory, and government sectors and partners’ engagement helped to enrich the content of the roadmaps.”

**Netsanet Kassa**  
WASH Officer, UNICEF Ethiopia

“WaterAid Ethiopia is happy to see the HH4A costed roadmap reach this stage, where the strong commitment of the government and other stakeholders is demonstrated. WaterAid facilitated the development and costing process of HH4A by providing technical and financial support on the situational analysis, preparation of a conceptual framework, conducting consultative workshops with stakeholders, preparation of a subnational action plan and supporting the publication and various communication materials for national launching and advocacy works.

WaterAid also facilitated sharing of the roadmap and advocacy work at various global and continental events and meetings such as the AfricaSan meeting, the Nutrition for Growth (N4G) summit, and the African Ministers’ Council on Water (AMCOW). Now Ethiopia has a costed HH4A roadmap with a vision that aligns with WaterAid’s vision of ending the water, sanitation and hygiene crisis together – for everyone, everywhere.

WaterAid believes this roadmap will serve as a guiding document to accelerate the hand hygiene practices of Ethiopians and will make our vision a reality. Hence, we call on all stakeholders of the HH4A roadmap to invest in hand hygiene to improve health, safeguard against infectious diseases, and protect communities from future health crises.”

**Yaekob Metena**

Country Director, WaterAid Ethiopia

## 5.2. Lesson 2: Seizing opportunities to raise political will

The Government of Ethiopia (GoE) was already on the journey once they developed ‘Total Sanitation to End Open Defecation and Urination’ (TSEDU) strategy to strengthen the country’s sanitation and hygiene status. The COVID-19 pandemic then became a key driver to strengthen the existing interventions toward hand hygiene. In Ethiopia, COVID-19 galvanised and focused political commitment and engagement. The MoH had been planning to enhance efforts towards hand hygiene and strategically plan to achieve targets; when the HH4A global initiative started, they decided to use that opportunity to develop a country-level roadmap.

The pandemic enhanced the attention given to hand hygiene, political commitment, stakeholder engagement, and the enabling environment at large. This in turn contributed to increasing awareness of the government officials and implementing partners on the significant health importance of hand hygiene and enhanced practice. So, the dual opportunities of (1) having increased political will due to the COVID-19 pandemic, and (2) the global HH4A initiative provided the impetus for the GoE to develop a country-specific national HH4A costed roadmap.

## 5.3. Lesson 3: Having a dedicated team to drive the process

Institutional leadership from the focal ministry and specific department or unit within the MoH is vital to drive such a process. The MoH in Ethiopia has a standalone national arrangement for hygiene within the Ministry – with existing human resources and a dedicated team.

According to the Director for Hygiene and Environmental Health at the MoH, this dedicated team makes them nimble and responsive – so when the HH4A initiative started, they could engage immediately.<sup>7</sup> Sanitation and hygiene are also flagship, high profile initiatives for the MoH. These combined were the two major factors that enabled Ethiopia to move fast on the roadmap development.

External to the GoE a wider ‘team’ of partners including UNICEF, WHO and WaterAid complimented each other and the MoH in supporting different aspects of the HH4A roadmap development process.

7. Interview with Ekram Redwan – Director for Hygiene and Environmental Health at the Ministry of Health 10 March 2022.





● Atalel washing her hands with clean water from a tap installed outside her parent's house, Amhara Region, Ethiopia. February 2023.

“Regarding the health sector, this national roadmap preparation and overall implementation were led by the Hygiene and Environmental Health (HEH) directorate. The HEH directorate is one of the major directorates in the Ministry and Hygiene is one component of the directorate initiative. Under hygiene, different focus areas include hand hygiene, menstrual hygiene management, oral hygiene and water hygiene.

The Hygiene, Water and Food Safety team leader technically co-ordinates all hygiene-related interventions from national, regional and district levels and managerially co-ordinates the hygiene team under the directorate.”

**Ekram Redwan**

Hygiene and Environmental Health Directorate Director, Ministry of Health

## 5.4. Lesson 4: Focussing on the whole system

For a long time, Ethiopia has been an example of political will and cross-sector coordination on WASH issues such as the HEP (Health Extension Programme), HEH (Hygiene and Environmental Health) strategy, community-led total sanitation and hygiene (CLTSH) guideline, IPC (Infection Prevention and Control), TSEDU initiative, school WASH – and despite this, hand hygiene practice and service coverage remains low.

The health sector in Ethiopia has been engaged in different interventions and much of the focus has been on raising awareness at the HEP (Health Extension Programme) level for hand hygiene (HEP, media, campaigns). However, other components were missing or significantly weaker – notably behaviour change, service delivery and other enabling environments (policies, regulations, HR capacity), that go along with social and behaviour change interventions.

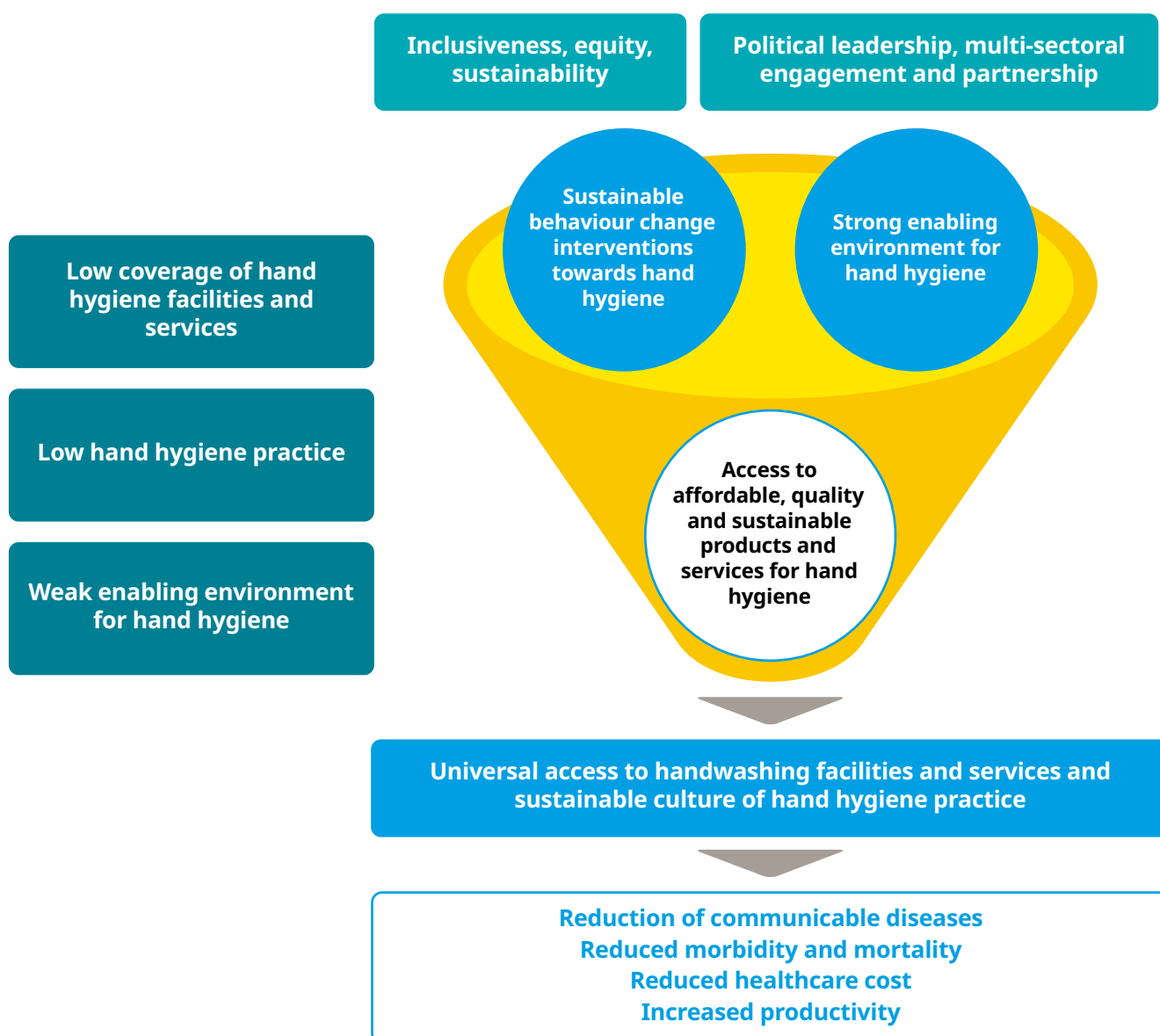
To address the situation, the roadmap includes three major strategic actions that will be significant changes in terms of moving the dial on hand hygiene:

1. Behaviour changes interventions
2. Sustainable service delivery
3. Enabling environment

The integration of all aspects – services, enabling environments and behaviour change – are needed to create and sustain handwashing practices. As the roadmap purely focuses on hand hygiene – other key hygiene behaviours in a wider definition of hygiene are missing. However, it is aligned with other national documents and guidance for the overall WASH implementation that address other key hygiene behaviours.

There is agreement<sup>8</sup> that the country roadmap reflects the current need to prevent WASH-related disease and respond to current and future public health emergencies or pandemics. The inclusion of a detailed costing against needs is also well-designed.

**Figure 6: Conceptual framework of HH4A roadmap, 2022**



8. From Key Informant Interviews with the Ministry of Education and UNICEF.

## 5.5. Lesson 5: Building on and embedding within existing multi-sectoral platforms

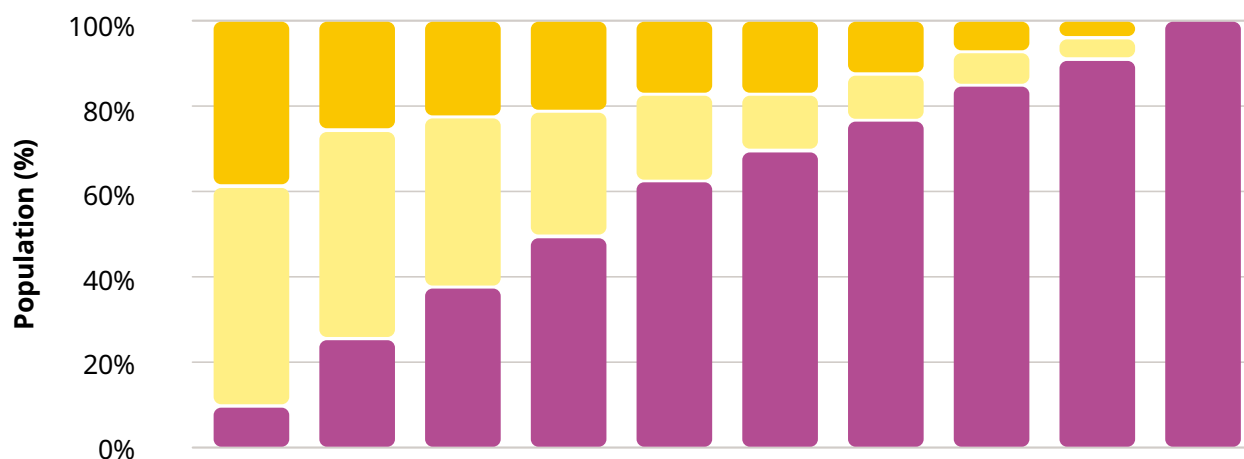
Hand hygiene roadmap implementation will be coordinated under the existing WASH coordination platform – One WASH National Programme (OWNP) – which integrates the Water, Education, Health and Financing sectors. This is for all of WASH and hand hygiene as part of that.

Each sector has roles and responsibilities as part of the One WASH coordination platform. Hygiene is the responsibility of the health sector, so all planning, budgeting and reporting is, therefore, a health function. The coordination is already strong and established at every level (national to local), now the roadmap will be a major agenda point at all coordination meetings.

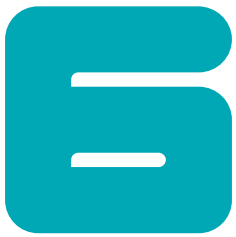
While the MoH led the development of the roadmap the entire process was developed jointly – strategic actions, roles and responsibilities are all well-defined between the MoH and other ministries. The roadmap will be translated into sector strategic annual plans, particularly in the health and education sectors. The quarterly, annual and midterm evaluations will then all report on hand hygiene.

The national target estimate was carried out by the cost estimation team by considering the 2025 MoH HSTP-II targets and the 2030 SDG target by the government. After these targets were interpolated by the actual estimated progress to reach universal access by 2030, stakeholders discussed and agreed on the target. Setting milestone targets is essential to accelerate progress and to ensure financing.

**Figure 7: National household hand hygiene coverage and target from 2021–30**







# Costing

**A unique aspect of the Ethiopia approach was to use a detailed hygiene costing tool developed by WaterAid to create the comprehensive costing plans needed for the government to allocate, plan and budget for hygiene over 10 years – including infrastructure, repetitive maintenance requirements and repetitive behaviour change programme activities. Detailed costing can then also be validated with the global tools to draw some lessons below.**

## 6.1. Approach

The roadmap costing exercise included three areas i.e., handwashing facilities, HBC activities and government staff cost, in three settings namely households, HCFs and schools by using data collection and cost estimation tools after in-country consultation processes, costing assumptions and validation.

The costing process started with an introduction to the different approaches for costing hygiene (including the WHO/UNICEF domestic hand hygiene costing tool and WaterAid's detailed tools for HBC programme costing and handwashing facilities costing for households, institutions and public places) for all WASH sector actors, donors, HH4A roadmap preparation TWG (Technical Working Group) and implementing partners including UNICEF, WHO, World Vision, SPLASH, Concern Worldwide, WaterAid and others. After multiple and different tools development orientations, customisation of the tools based on the Ethiopian context was completed. Input data (e.g. the unit cost for HBC activities, handwashing facilities infrastructure, and government infrastructure) and the cost was agreed upon with all WASH sectors and stakeholders. A consultative process was undertaken involving multiple workshops, desk reviews and higher officials' endorsements. Following the orientation MoH, sectors and

stakeholders agreed to proceed with the costing using the WaterAid hand hygiene data collection and costing tools first and also validate the matching with the global WHO/UNICEF tools.

## 6.2. Costing tool and assumptions

The costing tools are developed based on several hygiene behaviour change programmatic experiences and some context-specific assumptions. In the below table, we identified the three main handwashing facilities design models used for households, HCFs and schools, and identified costs for each infrastructure component. For each infrastructure, we identified the average unit cost of each component, the expected life cycle before replacement, and replacement costs. For support activities, we identified all the support activities to be performed from installation to operation of handwashing facilities and assessed time spent and other costs (such as per diem, etc). For hardware and infrastructure cost, the estimation was done for the infrastructure cost for water supply construction.

- Single tap, double taps, twelve taps and twenty-four taps costs with an estimated year of new construction and replacement.
- Operation and Maintenance (O&M) with an estimated 10% of replacement per year, as well as hygiene ladder-based estimate based on the expected theoretical end of life of infrastructure to estimate the need and cost for replacements.
- Separate running/operational costs were estimated for soap and water.

These unit costs were informed by actual cost estimation for each unit cost subcomponent by analysis of the market at the costing periods. Each of the asset subcomponents was costed and reviewed by the stakeholders before the total and final unit cost was prepared.

**Table 1: Handwashing facilities model design unit cost by component, HH4A roadmap, Ethiopia, 2022**

Handwashing facility (HWF) components		Hardware (US \$)			
		Initial cost	Operational cost	Theoretical life cycle	Replacement cost
HWF infrastructure for household [SINGLE TAP]	<b>Total cost</b>	<b>US \$13.85</b>	<b>US \$0.84</b>	<b>-</b>	<b>US \$13.02</b>
	Water container/jerry can	4.17	0.00	Every 2yr	4.17
	Tap/faucet	2.60	0.00	Biannual	2.60
	250gm bar of soap	**0.63	**0.63	Monthly	-
	Water for handwashing	**0.21	**0.21	Monthly	-
	Other (wooden handwashing stand)	6.25	0.00	Every 2yr	6.25
HWF infrastructure for institution (Health post) [SINGLE TAP]	<b>Total cost</b>	<b>US \$122.60</b>	<b>US \$0.00</b>	<b>-</b>	<b>US \$120.00</b>
	Sink (bowl)	3.33	0.00	Every 2yr	3.33
	Water container 60 litre capacity	12.50	0.00	Every 2yr	12.50
	Tap	2.60	0.00	Biannual	-
	Liquid soap/month	-	8.33	Monthly	-
	Water for handwashing	-	0.63	Monthly	-
	Other (steel handwashing stand)	104.17	0.00	Every 5yr	104.17
HWF infrastructure for health centre, hospital and schools [SINGLE TAP]	<b>Total cost</b>	<b>US \$10,163.12</b>	<b>US \$47.39</b>	<b>-</b>	<b>US \$183.33</b>
	Earthwork	864.04	N/A	-	-
	Plumbing works	3,672.92	N/A	Annual	183.33
	Water tank supply and installation with pipe connection works	1,069.69	N/A	-	-
	Concrete works	2,617.33	N/A	-	-
	Finishing works	288.75	N/A	-	-
	Installation of steel water tank stand	1,458.33	N/A	-	-
	Nudges/visual cues	62.50	N/A	-	-
	Liquid soap/litter/ETB	45.83	45.83	Monthly	-
	Water/M3/ETB	1.56	1.56	Monthly	-

**Table 2: HH4A roadmap total estimated cost from 2022–30, HH4A roadmap, Ethiopia, 2022**

Target group	Institution type	Type of cost	Total cost (US \$)
Health	Health post	Construction and maintenance	US \$593,202
		Operational	US \$10,563,864
	Health Centres	Construction and maintenance	US \$26,678,601
		Operational	US \$15,610,722
	Hospital	Construction and maintenance	US \$2,704,652
		Operational	US \$3,337,772
Hygiene behaviour change	HBC in all settings	Behaviour change activities in all settings using the ABCDE steps using BCD approach	US \$287,758,000
Education	Primary and secondary	Construction and maintenance	US \$274,504,660
		Operational	US \$191,718,054
Household		Construction and maintenance	US \$486,074,839
		Operational	US \$1,490,123,731
<b>Grand Total Cost</b>			<b>US \$2,789,668,097</b>

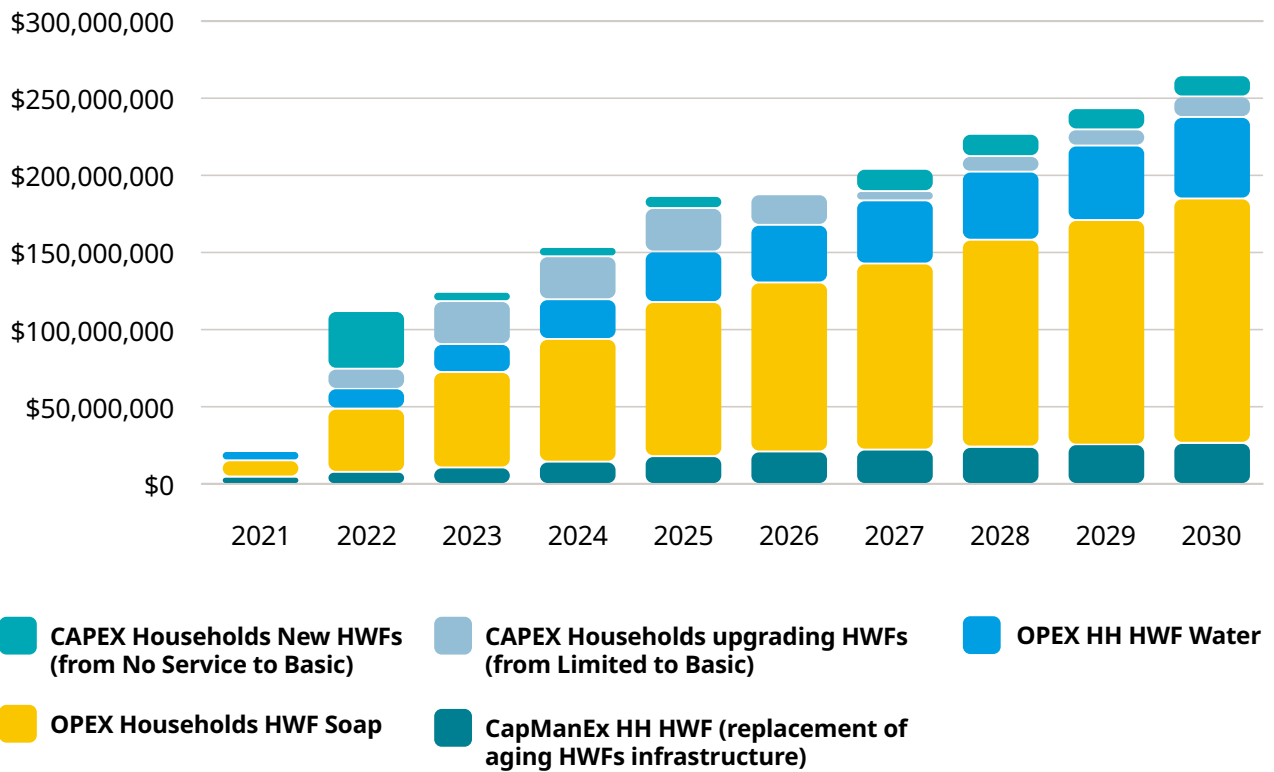
**NB:**

- **Construction and maintenance:** New, upgrading and replacement cost of handwashing facilities.
- **Operational:** Running cost for soap and water.

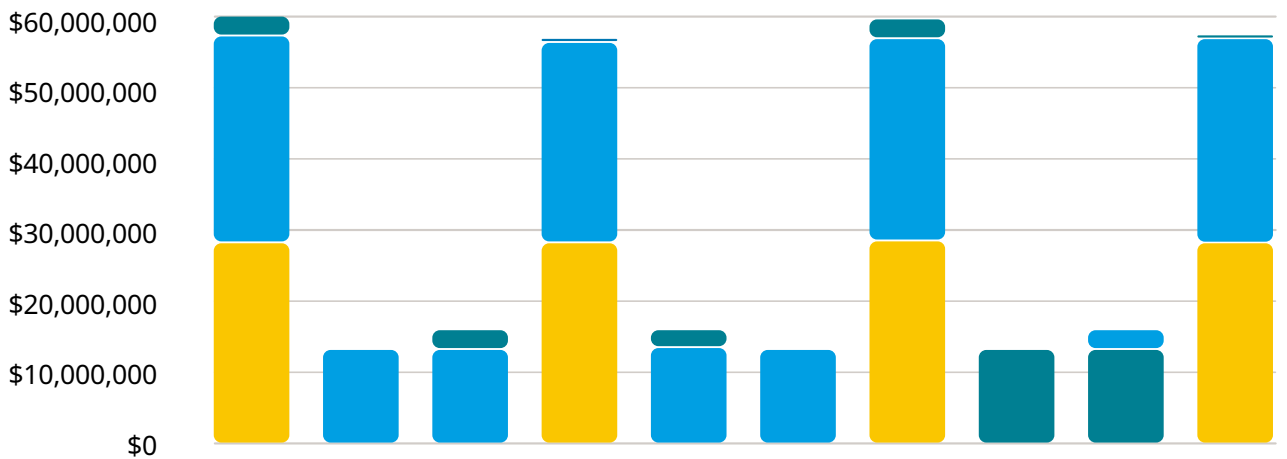
For the HBC costing, a detailed item-by-item assessment was done for each of the HBC activities and clustered them into the ABCDE steps (Assess-planning and understanding known and unknown, Build-formative research, Create-creative process to design, print the intervention package/tools, Deliver-capacity building and implementation to expose people with the hygiene intervention using multiple touch points, Evaluate-assessing the effect of the intervention) to identify different unit cost and activity repetition frequency. For details on each of the steps see Annex 1.

To assess government staff support cost, GoE salary, accommodation and per-diem scale from civil service commission references were used. To achieve 100% hygiene coverage as set in the roadmap, intermediary targets for hygiene service levels were set for 2026 and 2030 for households, HCFs (health posts, health centres and hospitals), and schools (primary and secondary). For detailed assumptions considered including activity categories of hygiene behaviour programme approach unit cost, costs components, etc (please refer to the annex).

**Figure 8: Handwashing facility (HWF) hardware costs, HH4A roadmap, Ethiopia, 2022**



**Figure 9: Hygiene behaviour change cost cost, HH4A roadmap, Ethiopia, 2022**



	Σ 2021	Σ 2022	Σ 2023	Σ 2024	Σ 2025	Σ 2026	Σ 2027	Σ 2028	Σ 2029	Σ 2030
E (Evaluation)	2533500	40000	2150000	40000	2150000	40000	2150000	40000	2150000	40000
D (Deliver)	25633460	11825960	11987960	25461460	11987960	11825960	25623460	11825960	11987960	25461460
C (Create)	25577000	0	0	25577000	0	0	25577000	0	0	25577000
B (Build)	378500	0	0	0	0	0	0	0	0	0
A (Assess)	26400	0	0	0	0	0	0	0	0	0
O	0	0	0	0	0	0	0	0	0	0

### 6.3. Lessons from the roadmap costing

- Costing detailed activities starting from the assessment, to formative research, to creative process, production, capacity building, implementation, supervision and monitoring, evaluation etc is vital to estimate the actual cost. It is also necessary to focus the behaviour change centric programme activities rather than just light traditional promotional activities.
- In the costing process, the early preparation of targets, baseline, unit cost, milestones/ activities, and materials needs is crucial. Costing hygiene products, facilities, cost for O&M etc is essential targeting to each of the settings.
- The involvement of respective sectoral ministries, donors, MoF, investment commission, and different civil society organisations is vital to input their views, validate the different data and include them in their plan for financing.

▼ Gishu Jafar demonstrating handwashing during a hygiene behavioural change campaign that combines theatre, music and handwashing demonstrations in the marketplace of Safoge, Bale, Oromia region, Ethiopia. March 2019.

The WHO/UNICEF Domestic hand hygiene costing tool has also been used to assess costs for Ethiopia. This tool is based on a template for global household hygiene cost analysis which can be used with reference estimate unit cost. This easy-to-use tool provides an estimate of the overall countries' household hygiene costs. The newly-developed WaterAid hygiene costing tool was agreed upon through a sectoral engagement workshop to be used for the roadmap costing as it provides the detailed costings.

As we have learnt from the process, the WaterAid costing tool and cost assessment takes more time but also provides a more detailed breakdown of costs – which would be a helpful starting point and allows for more detailed budgeting and finance advocacy (see Section 8 for a detailed comparison). We conclude that, starting with the WaterAid's detail costing tools to estimate the actual cost in detail was very helpful and use of those cost to feed into the WHO/UNICEF tools was useful exercise to validate the assumption they are making at top level.



WaterAid/Genaye Eshetu

“Costing is a key achievement – in the health sector they use another costing tool, and UNICEF/WHO also had a different costing tool – so to reach an agreement and then get technical assistance to have a very detailed costing is a good achievement using WaterAid tools.”

**Yared Tadesse**  
Water, Food Safety and Hygiene national coordinator





# Financing

**While the overall cost of achieving hand hygiene in Ethiopia is almost US \$2.8 billion between now and 2030, the resources required for the realisation of the roadmap will not come from the government alone and will require a combination of households, communities, government, donors, partners and the private sectors. Successful implementation of the HH4A campaign will require the committed involvement of different stakeholders that include the community, government, donors, and development partners. Based on the estimated cost, a separate financing strategy and mobilisation plan will be in place.**

## 7.1. Process

At the beginning of the HH4A roadmap development process, guidance was provided to the TWG from higher health sector officials regarding the government position on financing, possible strategies to mobilise the required resources, the proportion of government, partners/donors and community contribution, as well as the inclusion of subsidy schemes and the roadmap into existing government initiatives like OWNP and TSEDU.

During ministerial discussions, parameters were determined including no household subsidy (since there is no subsidy system for wider WASH and more specifically hygiene) – the officials explained the per household is minimal. The inclusion of HH4A in already existing WASH initiatives, the community must take responsibility for their handwashing facilities, and donors/partners must take equal share with

the government. The community's willingness to pay, ability to pay, donor commitment, donors' assumptions, the different requirements for attracting finance and finance tracking mechanisms were not studied, and different higher education institutions are not involved to generate the evidence. This presented a challenge due to the lack of more detailed pieces of evidence and involvement of higher education institutions in the development process leading to some assumptions and community contributions not being taken into account.

## 7.2. Learning

To secure the estimated cost, the roadmap pointed out the need for a separate resource/finance mobilisation strategy and lobbying using the strategy. For HH4A costed roadmap financing, the roadmap highlighted the need for a separate resource mobilisation approach/strategy from households, government, donors, private sectors and partners. Additionally, the initiative should also be included in already existing national programmes like the OWNP, TSEDU Ethiopia campaign and WASH developmental initiatives.

Based on the discussion (see table 3), the government will cover 14.6% of the estimated budget and play the leading role in forging strong alliances and mobilising resources; 14.6% of the overall budget is expected to come from different partners such as the World Bank Group, African Development Bank Group, EU (European Union), UNICEF, I/NGOs (international non-governmental organisations), and the private sector that are committed to supporting the development endeavours of the country. The community has an indispensable role in ensuring the successful implementation and sustainability of the HH4A initiative and is expected to make the remaining 71% budgetary contribution.



**Table 3: Expected financing options for HH4A roadmap implementation, Ethiopia, 2022**

Funding sources	% Share	Total (US \$)
Government	14.6	US \$406,734,763.11
Development Partners and NGOs	14.6	US \$406,734,763.11
Community Contribution	70.8	US \$1,976,198,570.21

The major government sectors that are responsible for the successful implementation of this roadmap are the MoH, Ministry of Education and OWP which are expected to fulfil hand hygiene facilities at HCFs and schools including HBC activities. The OWP Phase-II programme 307 woredas will be financially supported for the implementation of the HH4A roadmap – which includes household-level demand creation, HCFs and school hardware costs.

The UNICEF WASH officer suggested that “the estimated cost requirement for the roadmap – must be a dedicated budget allocation, and there should be a resource mobilisation to meet any gaps.” Previously there has not been a separate budget code for hygiene, this is included as an action in the roadmap – for the MoF to allocate a budget code.

Regarding household/community contribution for the implementation, the community engagement process and behaviour change initiative needs to be considered so that they can own and allocate the budget. Some business modality/subsidy types of the process are needed as well as the use of health extension workers to hear from the community voices. Regarding cost share among households, government and donors, the UNICEF WASH Officer also noted that “community contribution could be workable but there needs to be proper segmentation of the households according to wealth quintiles to see whether support is required.”

After the generation of evidence and cost of the roadmap, a financing strategy with a detailed required budget by year aligned to short, medium and long-term period activities in the strategic roadmap should be developed accordingly. Using the resource mobilisation strategic plan, the roadmap shall be marketed to the potential funding sources/financers to commit to financing starting from the community to the local and national government, international NGOs, private sectors, etc.



◀ Helen and Yemisrach, washing their hands at water taps built by WaterAid at their school, Amhara region, Ethiopia, January 2021.



## Experience from different costing tools

To perform the hand hygiene roadmap costing exercise, two different tools were used and the costs validated by the MoH. Finally, in Ethiopia, the WaterAid detailed estimates were used to complete the detailed costing assessment followed by WHO/UNICEF tools to validate the total cost. However, a comparison between the two approaches and costing tools was also performed, limited to the 'domestic'/household component (as the WHO/UNICEF tool was including only household estimates and not institutions) to identify key differences in the approach and cost outcomes.

The following table presents a comparison of the tools.

**Table 4: Comparison of UNICEF/WHO and WaterAid Hygiene tools, Ethiopia, 2022**

Parameters	WHO/UNICEF tool handwashing facilities costing	WaterAid hygiene costing tools used in Ethiopia for national hygiene roadmap costing
<b>High-level description</b>	The Excel-based tool aims to provide a cost estimate for government to implement a large household hygiene programme (with distribution across x years) and handwashing facilities for households	Multiple excel based tools combined allow estimating the cost of the detailed behavioural change programme and hygiene handwashing facilities in a different context (households, institutions, and public places) across different years (based on detailed activities plans)
<b>Scope of estimates</b>	Domestic setting only	Domestic, HCFs, schools, and public places
<b>What does the tool calculate?</b>	<p><b>Estimate costs:</b></p> <ul style="list-style-type: none"> <li>● Bringing households with JMP definition of hygiene 'no service' to 'basic'</li> <li>● Initial formative research, creative and design</li> <li>● Cost to repeat promotion and replacements</li> <li>● Cost of repeat replacement of infrastructure</li> <li>● Operational cost (soap and water)</li> </ul>	<p><b>Estimates costs of:</b></p> <ul style="list-style-type: none"> <li>● Bringing households and institutions from 'No service' to 'basic'</li> <li>● Cost of upgrading HHs and institutions with 'limited access' to 'basic'</li> <li>● Operational costs (soap and water)</li> <li>● Cost of hygiene behavioural change programme development and repeat activities such as initial formative research, creative process, design, production, transportation, testing, capacity development, implementation, regular monitoring cost to repeat promotion and replacements</li> </ul>

<b>Data disaggregation</b>	By urban and rural population.	<ul style="list-style-type: none"> <li>● Can be disaggregated to the specific community level and rural and urban (in Ethiopia was considered national data)</li> <li>● By urban and rural context (e.g., different unit costs)</li> </ul>
<b>INPUTS – current service levels</b>	Automatically uses the latest JMP Hygiene Service level data but can be customised as needed.	Data entry can include national or sub-national data (down to the community level) disaggregated or use national estimates (e.g., JMP Hygiene Service level).
<b>INPUTS – cost/ price data</b>	Use of international reference costs (adjusted to the country by the purchasing power parity (PPP) factor) – but adjustable by the user.	Cost data inputted for each infrastructure component and software activity using local costing data.
<b>INPUTS – handwashing facilities type</b>	Can choose from 2 models and all are applied to the whole population.	Can choose different types of handwashing facilities models (in Ethiopia was considered one model only for households and different models for institutions).
<b>INPUTS – software activities of behaviour change programme</b>	Can choose if to include interpersonal promotion or not.	Includes detailed list of multiple activities following BCD approach (all five steps process – ABCDE) and behaviour change programmes.
<b>Key assumptions</b>	Intervention is assumed to be a campaign including community or group activities and mass media, with a useful life of 5 years.	Intervention are community based (face to face intervention, group activities) and limited mass media. The package re-production in every 3 to 5 years.
<b>Outputs</b>	The cost of formative research and creative design is distributed equally across the years – when probably most of the cost will appear at specific initial years (so not useful for detailed planning but rather high-level multiple-year estimate).	Supports more detailed discussion about activities and programme plan – timings and separate cost.

A comparison of the output cost estimates from the two different tools with Ethiopia data was performed. For this comparison, the following setup was used:

- WHO/UNICEF tool: the ‘automatically estimated’ costing data inputs for Ethiopia using settings for purpose-built handwashing facilities and presence of promotion with inter-personal activities were set.
- WaterAid hygiene costing tool: household and institutional costing with Ethiopia-specific unit costs data and hygiene behavioural change detailed programme costing estimates.

**Table 5: Comparison of cost outputs based on UNICEF/WHO and WaterAid Hygiene tools, Ethiopia, 2022**

Pillars	WHO UNICEF tool (USD)	WaterAid tool as used in Ethiopia (USD)
	Automatic setting and assumption of the model [Total US \$ per 10 years estimate]	Editable and can be customised for specific country context [Total US \$ per 10 years estimate]
<b>Formative, creative design</b>	98,200 (initial cost)	<b>Assess</b> (Programme design, desktop review, framing workshop): 26,640 <b>Build</b> (Formative research, baseline): 378,500 <b>Create</b> (creative process, design, pre-testing production of materials, transport, guidance): 102,308,000
<b>Initial promotion</b>	522,464,295	<b>Deliver</b> (capacity development, implementation of behaviour): 173,621,600 <b>Evaluation</b> : 11,333,500
<b>Top up promotion</b>	364,516,294	Included in above
<b>Household handwashing facilities construction</b>	256,683,132	New construction: 123,015,927 Upgrade (from unimproved to improved): 173,384,653 Replacement cost: 193,716,085
<b>Household soap</b>	736,678,463	1,117,592,798
<b>Household water</b>	77,078,213	372,530,933
<b>HCFs handwashing construction</b>	Not calculated	29,97,454
<b>HCFs handwashing operation</b>	Not calculated	29,512,357
<b>Schools' handwashing construction</b>	Not calculated	274,504,660
<b>Schools' handwashing operation</b>	–	191,718,054





WaterAid/Genaye Eshetu

According to the detailed costing tool, US \$1.97 per person in Ethiopia is required to achieve the hand hygiene SDG and roadmap goals which are higher than the cost estimated by the WHO/UNICEF tool as US \$0.69.



▲ Tddisae standing by a tap stand built by WaterAid in her community, Ethiopia. May 2019.

**Table 6: Cost per person comparison by UNICEF/WHO and WaterAid Hygiene Tools, Ethiopia, 2022**

	WHO UNICEF tool	WaterAid tool as used in Ethiopia
Average annual cost per person (US \$)	0.69	1.97

# 9

## Challenges

**HH4A is a new initiative and making hand hygiene a standalone programme while previously hygiene was embedded in WASH or the sanitation roadmap is complex. Because of that, it took some time to reach a consensus as a technical working group. However getting to a consensus for this initial aspect of the discussion meant that experts were engaged and involved in the rest of the process.**

Urgent national security problems also presented a challenge to the prioritisation of the hand hygiene initiative.

Throughout the implementation process the following challenges will need to be addressed in order to achieve targets. For effective and sustainable HBC to occur, supply (facilities) and behaviour change programme elements must move in parallel. However, in Ethiopia, there is extremely low WASH coverage – including water supply – which will be a major challenge for implementation and will undoubtedly result in a lag between achieving targets in the areas with an adequate water supply and those areas of the country that are water scarce.

Access to other products, like soap, will be a challenge but is something the implementers are starting to address through the WASH marketing approach. The 70% of costs associated with achieving universal access to hand hygiene are estimated to be borne by the community, however in Ethiopia, the poverty rate is high hence this prediction is challenging to achieve without much focused behaviour change intervention.

For the design and implementation of HH4A, communities' willingness and ability to pay for handwashing facilities, O&M, running costs, different technology options, the effect of country and community WASH status, sluggish progress of WASH access, and handwashing facilities supply is not studied and addressed – which in turn pose significant challenges for development, costing and implementation of the roadmap.

▼ Bizuayehu Anteneh, collecting clean water from one of the water points in her village, Amhara Regional State, Ethiopia. September 2021.



WaterAid/Frehiwot Gebrewold



# 10 Conclusions

**Leadership from the MoH, along with strong collaboration across sectors, has been essential in developing and generating joint ownership of a comprehensive roadmap and has the public sector roles in facilitating hand hygiene clearly defined. A dedicated and accountable government institution also helped accelerate the roadmap development process.**

Setting up a national level steering group and coordination group for the development of the roadmap under the leadership of the government, but closely supported by key partners, is key to drive this process faster. Involvement of multiple partners including different ministries, donors, UN agencies, I/NGOs, private sector etc in each of the key steps such during the roadmap development process, during the costing phase and financing discussion is key.

Establishing deep and well-functioning relationships between government, donors, I/NGOs, private sector and civil society is fundamental in operationalising the roadmap.

The use of the WaterAid costing tool, which is based on detailed, context-specific cost estimates, has provided a robust basis for GoE to allocate resources, plan and budget for hygiene including infrastructure, HBC and recurrent costs including staff. WHO/ UNICEF global tools then also offer top-level cost estimates. Based on the Ethiopia experiences, some of the assumptions made as part of the global tools needs revision and or contextualisation based on the country context.

The next steps of driving investment against the costed plan will be essential to accelerating progress. An ambitious financing strategy will be required which allows for diversification of funding sources and sets out clear mechanisms for reaching the people living in poverty.



▲ Gashaw, health bureau programme coordinator, washing his hands at a hand-washing stand, Amhara region, Ethiopia. January 2021.

A significant portion of the costs associated with the roadmap will be assumed to be covered by the individual households – including soap and water etc. A household-level behaviour change promotional campaign is essential to transform the current level of understanding and make hand hygiene part of the social norms and soap/water part of the household essentials. The government incremental commitments to invest on hygiene, and donor contribution, is also vital to achieve universal hand hygiene by 2030 in Ethiopia.

Proper dissemination of the roadmap is key to raise the awareness among stakeholders and key to strategically ensure all stakeholders are publicly accountable to deliver the roadmap.

# 11

## Recommendations

### 11.1 Recommendations to the GoE

#### Costing and financing

Now that the roadmap has been costed:

- A specific finance mobilisation plan and strategy should be designed for the national roadmap by including additional resource mapping, aligning with existing WASH sector development initiatives such as OWNPN, and national campaigns such as the TSEDU Ethiopia campaign.
- Based on roadmap annual targets, detailed annual costing and finance needs should be prepared. Each sub-national target should prepare its specific activities by using the national roadmap framework and costing principles.
- Long term commitments will be vital to the roadmap implementation – financing should remain top of the agenda going forward.

#### Equity and inclusion

- Further work should be undertaken to address the hand hygiene needs of the poorest and most marginalised populations. Household segmentation is required to provide specific support measures for separate groups, for example through targeted subsidies.
- Ethiopia has a productive safety net programme providing social support from the government – potential to address hand hygiene subsidy through this mechanism should be explored further.

▼ Kenubesh washes her hands at a handwashing station that uses water collected from the nearby spring, Farta Woreda, Amhara region, Ethiopia. January 2021.





## 11.2 Recommendations to national governments planning to develop costed hand hygiene roadmaps

### Roadmap development process

- Identify one lead Ministry to drive the process in active collaboration with multiple stakeholders and ministries. The involvement of different ministries with clear responsibilities is key to the process.
- Establish or assign a government-led steering committee/coordination mechanism supported by key partners.
- Ensure adequate time is taken throughout the development and costing process to discuss the activities in detail to ensure consensus and joint ownership.
- The roadmap should clearly articulate the roles/responsibilities of different parties such as households/communities, schools, HCFs, governments, donors, I/NGOs, private sector, and include a monitoring plan for course correction.

### Costing and financing

- Based on roadmap annual targets, country-specific detailed annual costing and finance needs should be prepared using customised country-specific hand hygiene costing tools.
- At the start of the process, unit costs or price tags should be prepared for each hand hygiene-related intervention e.g. hardware, behaviour change in details, government staff costs.
- Establish and allocate financing for the roadmap according to roles and responsibilities at different levels – for example government (and donor) costs would include the enabling environment, demand creation, and HBC; households would be responsible for costs associated with household facilities; whilst costs for hand hygiene in institutions would be allocated to government and donors.
- Long term commitments will be vital to the roadmap implementation, financing should remain top of the agenda going forward.



▲ H.E. Dr Dereje Duguma (right), State Minister of Ministry of Health (and Abireham Misganaw (left), WaterAid Ethiopia's WASH Advocacy Advisor & Acting Head of Advocacy.

## 11.3 Equity and inclusion

- Be intentional to ensure that equity and inclusion principles are part of the roadmap development process. This could be achieved by having a designated focal point for equity and inclusion during roadmap development.
- Sector should use an equity and inclusion framework from the beginning of the process and prioritise activities and specific marginalised target groups to be addressed.
- Require proper household segmentation to identify marginalised populations.

# 12 Annexes

## Annex 1: Unit cost assumptions templates

### 1.1 Costing assumption template for hardware

<p>Please identify the two main HWFs design models used in households, institutions and public places and identify costs for infrastructure and support activities. For infrastructure identify the average unit cost of each component, expected life cycle before replacement and replacement costs. For support activities, identify additional activities to be performed to support installation and operation of HWFs and assess time spent and other costs (like per diem)</p>	Hardware			
	Initial cost	Operational cost	Theoretical life cycle	Replacement cost
	What was/is the cost of initial installation activity?	What is the ongoing regular costs for this component (consider energy etc.)?	How often do you expect to replace this component?	What is the replacement cost?
	[currency]	[currency]/ [per month]	[currency]	[currency]
<b>HWF infrastructure for household [SINGLE TAP]</b>				
	<b>Total cost</b>			
Detailed costed				
Detailed costed				
Detailed costed				
<b>HWF infrastructure for institution (Health post) [SINGLE TAP]</b>				
	<b>Total cost</b>			
Detailed costed				
Detailed costed				
Detailed costed				
<b>HWF infrastructure for health centre, hospital and schools [MULTIPLE WITH 12 TAPS]</b>				
	<b>Total cost</b>			
Detailed costed				
Detailed costed				
Detailed costed				



## 1.2. Costing assumption template for software

Category	Activity group	Detailed cost activity	Cost category	Note in-country details related to the activity	Unit cost	Additional costs (such as logistics communications, meeting rooms)	Area of application	Duration of activity	Frequency of cost	
				Please provide details of the type of activity	What is/ has been the cost to deliver this activity?	What have been the additional logistic costs to deliver this activity?	Was it national, or for how many districts/ towns etc?	How many days do you expect/did the activity last?	Was/is this a one off activity or expect to be repeated to ensure?	Every how many years (or partial years) do you expect this to be/ has repeated?
A (Assess)										
B (Build)										
C (Create)										
D (Deliver)										
E (Evaluate)										

### 1.3. Costing assumption template for government staff cost time

Category	Activity group	Detailed cost activity	Cost category	Who will be involved from national and governmental staff?	How many people in that role involved in the activity?	How many days are planned to be dedicated by each person to perform the activity by government staff?	What is the average monthly salary for a person in that role?	What is the average daily salary for a person in that role?	What are/were the additional daily costs (such as transport, refreshments, communications, per-diem)
				[Role]	[Number]	[Number of days per activity or per month]	[\$ per month]	[\$ per day]	[\$ per day]
A (Assess)									
B (Build)									
C (Create)									
D (Deliver)									
E (Evaluate)									

## Annex 2: Summary of the health and economic benefits of hand hygiene

Handwashing with soap is linked with: up to 30–48% reduction in risk of endemic diarrhoea;<sup>9,10,11</sup> up to 23% reduction in respiratory infection; 36% reduced personal risk of seasonal coronavirus infection; 27% reduction in infection-related infant deaths through improved handwashing practices in HCFs and a further 40% by handwashing in the postnatal period; up to 50% reduction in pneumonia; substantial reduction in neonatal infections; 43% (fewer days) reduced school absenteeism.

Rigorous hygiene, including handwashing, is crucial in reducing the transmission of outbreak-related pathogens; it helps prevent the spread of Cholera, Ebola, shigellosis, SARS hepatitis E, neglected tropical diseases, and COVID-19.<sup>12</sup>

Handwashing with soap is one of the most cost-effective public health interventions in reducing the global infectious diseases burden, costing just US \$3 per disability-adjusted life year (DALY) averted. Investing in handwashing with soap programmes can bring large economic gains.

▶ Atalel washing her hands with clean water from a tap installed outside her parent's house, Ethiopia. February 2023.



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**WaterAid is an international not-for-profit, determined to make clean water, decent toilets and good hygiene normal for everyone, everywhere within a generation. Only by tackling these three essentials in ways that last can people change their lives for good.**

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