



# Costing & Budgeting for WASH in Health Care Facilities

*“How do we leverage the data on costs to make the case to decision makers to finance WASH in HCF?”*

**Global Webinar: Thursday 1 February 2024**



# Overview of costing and budgeting

**WHO/UNICEF technical webinar series**  
**1 February 2024**

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**The Water Institute at UNC**

**University of North Carolina at Chapel Hill**

# Key terms

## Costing

- Determine how much money is required to deliver WASH services
- Identify the activities/inputs and associated costs

Total cost = quantities \* unit costs

- More technical process

*How much money is needed to achieve and sustain WASH services?*

## Budgeting

- Determine how much money will be allocated over what timeframe
- Identify funders / funding sources
- Create a plan for how to pay
- More political process

*Who will pay how much, for what, and when?*

# Why do budgeting and costing?

- Understand the true costs of service provision
  - Certain expenses are often overlooked (maintenance, training)
- Plan programs
  - Evaluate and compare different intervention types (cost-effectiveness)
  - Ensure sufficient funding to reach targets / do activities
- Inform sustainable investments
  - Reach agreements among stakeholders to fund necessary inputs
  - Avoid investments with unaffordable operations and maintenance

# Scenario 1 – Costing first

- Funders commission a costing study to estimate the costs of basic WASH
- Consultants conduct a costing study using a representative sample
- Funders use costs data to develop budgets

## Advantages

- Accurately plan for true costs
- Avoids upfront investments with unaffordable O&M
- Fewer surprises

## Disadvantages

- Slow
- Expensive primary data
- Limited secondary data



# Scenario 2 – Budgeting first

- Funders allocate a fixed amount for WASH in HCFs
- Implementers conduct costing to understand what they can afford, to compare options
- Implementers develop a plan that falls within allocated funding

## Advantages

- Faster
- More realistic?

## Disadvantages

- Surprise expenses
- More trade-offs / constraints

# Scenario 3 – Costing and budgeting together

- Some budget for WASH in HCFs already exists
- Costing studies demonstrate gaps between available versus needed budget
- Champions use data to advocate for increased budgets

# Data inputs for costing & budgeting

## Lifecycle costs

### 1. Installation

- Hardware (infrastructure, supplies)
- Software (trainings, setup)

### 2. Operations and maintenance

- Infrastructure repairs
- Trainings
- Personnel
- Consumable supplies
- Supervision and support

### 3. Decommissioning and disposal

- Removal of defunct infrastructure
- Preparing to restart the cycle





# Costing tools

## UNC toolkit

- Budgeting guidance note
  - Costing toolkit
  - Case study
- (pre-print, contact [darcy.anderson@unc.edu](mailto:darcy.anderson@unc.edu))



## Key features

- Designed for lay users / practitioners
- Data collection at facility-level
- Designed for primary healthcare, smaller clinics



# Costing tools

## Upcoming tools

**WaterAid:** participatory assessment of the costs for municipality-wide WASH in healthcare facilities in Timor Leste

## Non-HCF settings

- [WHO/UNICEF cost of domestic hand hygiene interventions](#)
- [School WASH operation and maintenance calculator](#)
- [WASH SDGs costing tools \(country-level\)](#)
- [IRC WASH Costs tool \(household settings\)](#)



# Costing studies and secondary data

- Global / systematic review
  - [Estimating the cost of achieving basic water, sanitation, hygiene, and waste management services in public health-care facilities in the 46 UN designated least-developed countries: a modelling study](#)
  - [Safe Healthcare Facilities: A Systematic Review on the Costs of Establishing and Maintaining Environmental Health in Facilities in Low- and Middle-Income Countries](#)
- South-East Asian Region
  - [How much does it cost to meet the standards for making healthcare facilities water, sanitation, and hygiene \(WASH\) compliant?: analysis from Assam, India](#)
  - [Estimating the cost of interventions to improve water, sanitation and hygiene in healthcare facilities across India](#)
- African region
  - [National Strategy for Water, Sanitation and Hygiene-Infection Prevention and Control in Healthcare Facilities, Ghana](#)
  - [Improving water and hand-washing services in rural health care facilities in Kitui County, Kenya](#)
  - [Development and application of tools to cost the delivery of environmental health services in healthcare facilities: a financial analysis in urban Malawi](#)
- Region of the Americas
  - [Cost Analysis for Clean Clinic Approach Activities in Guatemala and Implications for Scale-Up](#)



# Utilizing Cost Data to Advocate for Financing: WASH & IPC in Health Facilities

February 2024



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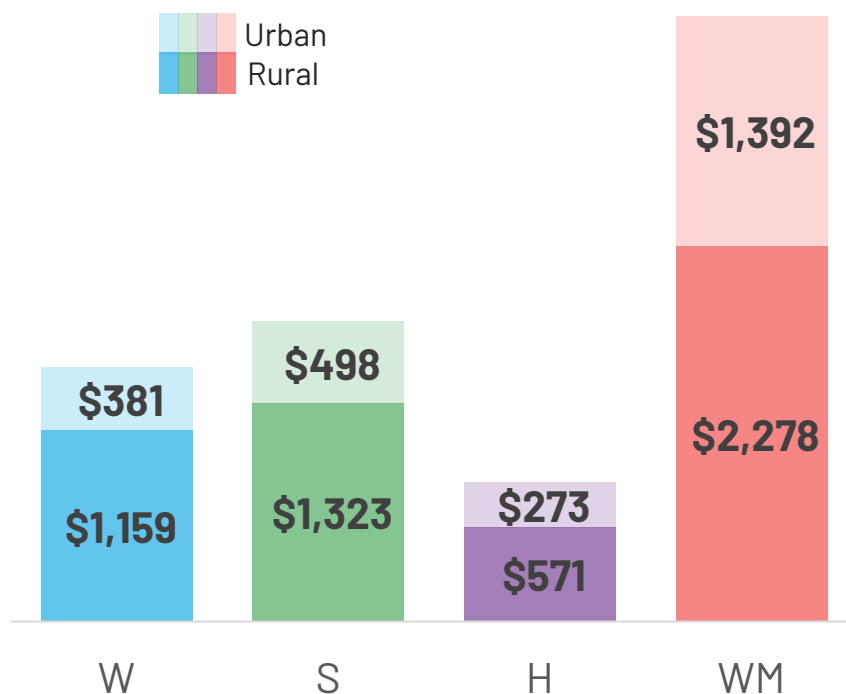
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# OUTLINE

- Using costing data to make the case for funding and financing
- Madagascar Costing for Universal Access to Water and Electricity in HCF
- Deciding who pays

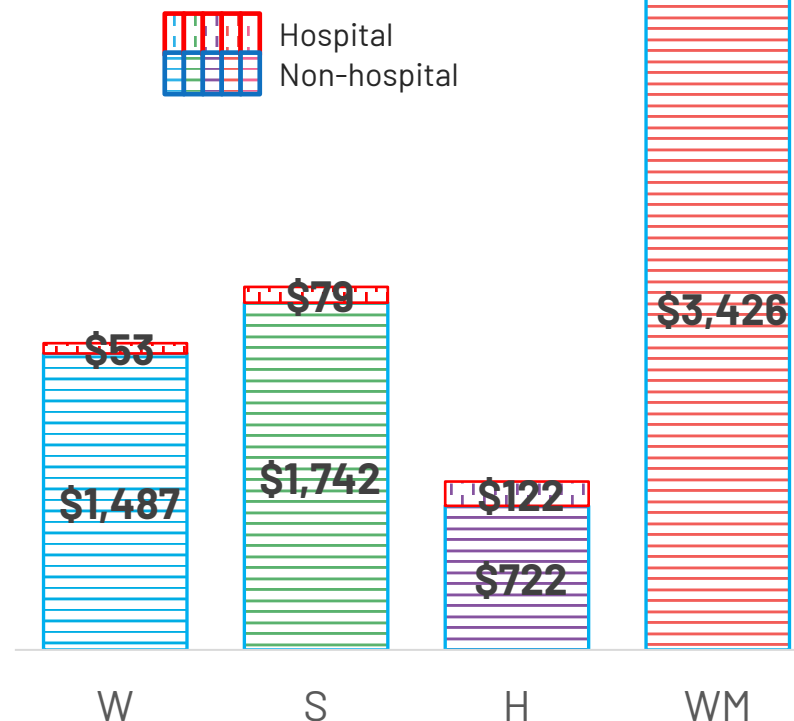
# USING COSTING DATA TO IDENTIFY INVESTMENT GAPS

**Costs by rural urban\***  
(US\$ millions)



Greatest needs are in **rural** areas across all WASH services

**Costs by facility type\***  
(US\$ millions)



Investment needs in **non-hospitals** outweigh those in hospitals

# USING COSTING ESTIMATES TO COMPARE AGAINST OTHER SPENDING

**US\$ 0.54–0.79** (Cap:  
US\$ 0.24–0.40,  
O&M: US\$ 0.30–0.39)

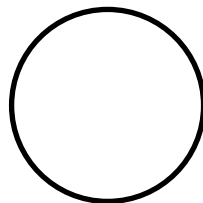
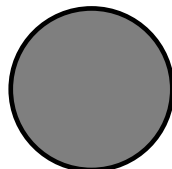
US\$ 0.80  
(range: US\$ < 0.01–2.55)

US\$ 3.01

US\$ 3.09  
(range: US\$ 0.01–15.72)

US\$ 10  
(range: US\$ 3–553)

US\$ 11.59



## Annual investment needed per capita for WASH in HCFs in LDCs (2021–2030)

Capital health spending per capita by  
23 LDC governments  
(Global Health Expenditure Database)

ODA per capita for WASH in LDCs in 2018  
(OECD CRS 2020)

Annual spending per capita on  
WASH by 22 LDC governments  
(GLAAS 2019 Report)

Recurrent health spending per capita  
by 44 LDC governments in 2018  
(Global Health Expenditure Database)

Annual investment needed per capita for  
universal basic WASH in LDCs (2015–2029)  
(Hutton & Varughese 2016)

# USING COSTING DATA TO ESTIMATE FINANCING NEEDS: CASE OF MADAGASCAR

**Objective:** to enhance **quality of primary health care services** through critical water and energy infrastructure

## Purpose of costing exercise:

- Inform **budget planning, allocation** and tracking at national level in collaboration with Ministry of Health and Ministry of WASH
- Assess **costs for universal access** to water and energy services in HCFs to meet SDGs 2030

## METHODOLOGY

1. Evaluate the gaps in access
2. Determine water & electricity requirements per HCF type
3. Calculate unit costs for different scenarios

## FINDINGS

Service	Access	Investment needed for universal access (USD)	Financing Gap (USD)
Water	26%	57.5 M	85 M
Electricity	30%	41 M	
Additional investments would be needed for basic sanitation, hygiene and waste management services			



# A NEED TO UNDERSTAND FINANCING GAPS AT COUNTRY AND REGIONAL LEVELS

Countries where in-depth costing studies of WASH in Health Facilities have been conducted by WB and UNICEF

- Democratic Republic of Congo
- Ethiopia
- Ghana
- Madagascar
- Nepal
- Tanzania
- Uganda
- Zimbabwe



# DECIDING WHO PAYS: PUBLIC, PRIVATE, PARTNER

- Just 11 percent of countries report having **sufficient resources to reach national targets** on WASH in HCF (GLAAS 2019)
- Only **one-quarter of national budgets** have line items for WASH in health care facilities
- Appropriate **mix of funding sources** that considers:
  - capital and recurrent costs
  - service (water supply, sanitation, hygiene, waste management) and service chain
  - treatment and distribution system

THANK YOU

# COST TO ACHIEVE BASIC COVERAGE OF WASH IN PUBLIC HEALTH FACILITIES IN LDCS

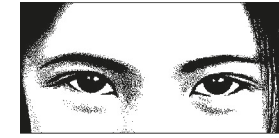
An additional **US\$ 6.5–9.6 billion** is needed to achieve basic levels of service by 2030

**US\$ 2.9–4.8B**

more in **capital investment**,  
equal to **US\$ 2.43–3.99** per  
capita

**US\$ 3.6–4.8B**

more in **recurrent spending**,  
equal to **US\$ 2.99–3.89**  
per capita



Terre des hommes

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# **Advancing WASH in HCFs – A Costing Case Study from Thakurbaba Municipality, Nepal**

Speaker - Laxman Kharal Chettry,  
Terre des hommes ([tdh.org](https://tdh.org))

WASH in HCF, Webinar / Case study #1: Nepal / February 1, 2024



## 2. Context of the Costing Exercise

### Connecting Costing to Policy

- An exercise within the process for the development of a model policy on “*Operation and Maintenance (O&M) of WASH in HCFs*”, working in the eight HCFs of Thakurba municipality, Bardiya, Nepal.
- The outcomes provided a basis for:
  - (a) the municipality-level WASH in HCF O&M policy;
  - (b) at national level, the 'Nepal Roadmap for WASH in HCF' developed by the Ministry of Health and Population.



## 3 - Services provided by the eight HCFs

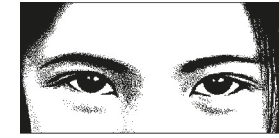
1. OPD (outpatient department) services - in all the 8 HCF  
*(210 to 1,418 per month per HCF)*
2. Laboratory and maternity services – in 4 HCFs.



## 4 - Methodology and Tools

- Costing was based on the **Spreadsheet for Costing** of Environmental Health Services. (WASH in HCF CoP).
- Integration of the concept of **output** and **outcome** indicators (Coverage, Functionality, and Usage.)
- **Data Sources** - Estimation by Engineer, Records, Interview
- Net present value =  $\text{Amount} / (1 + \text{discount\_rate})^{\text{years}}$





# 5 - Costing Components

## 1- **Capital Costs** (hardware and software)

- Expressed as **Annual Capital cost** for 2023 using an 8% annual discount rate over the life (years) of WASH facility.

*(current cost x discount rate)/(1-(1+discount rate)^-years))*

- **Existing** and **additional** needed for increasing Coverage and Functionality

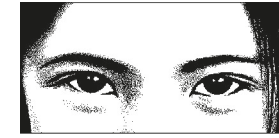
## 2 - Annual **Operation and Maintenance** Costs.

- **Existing** and **additional** needed for increasing Coverage and Functionality

## 6 - Costing Results (in USD)

<b>Total Capital Annual Cost (from 2023)</b>	<b>18492</b>	<b>34%</b>
Current	16383	30%
Additional needed for upgrading	2109	4%
<b>Total Annual O&amp;M Cost (2023)</b>	<b>35822</b>	<b>66%</b>
Current	22675	42%
Additional needed for upgrading	13147	24%
<b><i>Total Annual Cost (Capital &amp; O&amp;M)</i></b>	<b><i>54314</i></b>	<b><i>100%</i></b>

Total annual costs (capital and O&M) for the eight HCFs in 2023 - **USD 54,314**



## 7 - Policy Implications and Achievements

- WASH in HCF Operation & Maintenance policy for Thakurbaba Municipality.
- Municipal recovery fund to be used for O&M of WASH facilities.

## 8 - National level Impact

### **Influence on National Roadmap for WASH in HCF (2024-2030)**

- Served as a reference in the 'Nepal Roadmap for WASH in HCF'.
- Demonstration of the impact of localized, data-driven approaches on national policy-making.

## 9 - Future Directions and Expansion

1 - Continuing our work with the municipality in implementing the O&M policy.

2 – Introducing the following into our program in other countries, including India and Bangladesh:

- (a) Costing for evidence-based planning, budgeting, and fund raising;
- (b) Enhanced Operation and Maintenance assessed through proxy impact indicators of Functionality (output) and Effective Use (outcome).

## Swiss Water & Sanitation Consortium



# THANK YOU!







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## Costing and Budgeting for WASH in HCF

### Tajikistan's Case

Budget

# Background

- WASH Program was initiated in 2019 and section was established in 2023
- The big picture of the WASH landscape was unclear
- Partners were mostly working in silos
- Roles were overlapping among ministries and lack of leadership
- Sectoral progress and key priorities were unclear



# Key initiatives

- UNICEF carried out the **first JSR** which led to understanding;
  - The existing financing in the sector (0.67% of the annual GDP) against what is required
  - Institutional arrangements and capacities
  - Policy and regulatory environment
  - Country systems
  - Planning, monitoring and implementation capacities
  - UNICEF's strategic entry points
- Updating of the National WASH standards in HCFs and its endorsement by the government
- Agreement with the government to carry out a standards compliance survey and costing as per the new standards
- Development and endorsement of the WASH in HCFs investment case

# Investment case and its aim

- **Advocacy Tool:** Evidence for supporting advocacy efforts to bring greater attention to the impacts of the lack of WASH in health care facilities in Tajikistan, and among Government, partners and donors.
- **To quantify Impact and need in financial terms:** Initial estimates for the total financial needs, the funding currently available/spent and the funding gap for WASH in health care facilities in Tajikistan
- **Prioritisation of needs:** Based on the analysis, identification of key priorities in terms of immediate investments.
- **Cost of Inaction:** An understanding of the cost of inaction in terms of social impacts related to public health.
- **Roadmap:** Development of a costed country roadmap for investing efficiently in WASH in health care facilities.

# Costing approach and leveraging of data

- Starting with UNICEF's direct assessment data – up to 1500 PHCs and over 60 secondary HCFs
- Collecting data from key partners as co-convenor of the WASH in HCF coordination platform
- Accessing data from the construction department of the Ministry of Health
- Calculating Capex and Opex based on limited, basic and improved categories of WASH coverage

<b>Primary</b>	<b>2,670 HCFs (e.g. medical homes and medical centers)</b>
<b>Secondary</b>	<b>330 HCFs (central district hospitals, numeric hospitals, rural inpatient health hospitals/centers)</b>
<b>Tertiary</b>	<b>297HCFs (national and city level level hospitals/centers, or specialised hospitals located in district centers)</b>

# Key opportunities and learning

- Example of the **UN Water Conference** and UNICEF support to on proposing commitments based on JSR – led to increased financing and actions for increased coverage (State program, National Strategy), stronger political will.
- **Dushanbe Water process** is upcoming as a global opportunity. UNICEF Tajikistan plans to present the case and gather commitment – Also will work with the government on the adoption of the protocol on water and health



Thank You

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