



Assessing Value for Money of WASH services in small towns

Establishing a framework for analysis of ONEWASH Plus Programme interventions

Fast facts

Value for Money in the WASH sector

Most of the VfM studies done in the WASH sector to date are limited to the analysis of construction costs and number of people with access. Few examine service levels which hinders comparisons.

Value for Money in the ONEWASH Plus programme

The programme is using VfM analysis to assess the costs, efficiency and effectiveness of WASH programmes in eight small towns and surrounding villages.

Why Value for Money?

Value for Money (VfM) is defined as “maximising the impact of each pound spent to improve poor people’s lives” (DFID, 2011). It requires that all costs, outputs (infrastructure), outcomes (quality of services provided) and impacts (on health, economy etc.) are analysed together.

VfM can provide answers to questions like:

- What are the unit costs of key inputs?
- How much does it cost to provide support to programmes?
- Is the procurement process efficient?
- What are the overall costs per person served per year? “Served” means that the service matches national norms.
- Who is paying for what? And how much funding is leveraged from other sources?
- Is the programme delivering what it has promised?
- How do costs compare with the costs of other similar programmes?
- For each Pound/Dollar/Birr invested what is the impact on people’s lives?

VfM in the ONEWASH Plus Programme

It is important to prepare for VfM at an early stage, otherwise there is a risk that the required data will not be available or collected. A lack of available data has limited other recent VfM studies in Ethiopia. This learning note presents the data requirements for VfM analysis, discusses procurement processes and examines costs of some other programmes for preliminary comparison.

Scope of the study

Our VfM study focuses on the urban component of the ONEWASH Plus Programme which is implemented by UNICEF with the Government of Ethiopia (GoE) and funding from DFID. It aims to provide support to capacity building and management for better services in eight small towns and the surrounding villages. The overall budget for the programme is of about US\$ 36 million.

The Value for Money analysis focuses on four critical aspects (see Figure 1):

1. Capturing all the costs from all sources of finance for constructing systems and maintaining services in eight small towns and surrounding villages.
2. Analysing the outcomes for each pound (or Birr) invested.
3. Comparing results with other similar programmes and their costs.
4. In-depth analysis of procurement processes and other factors that might influence efficiency and sustainability.

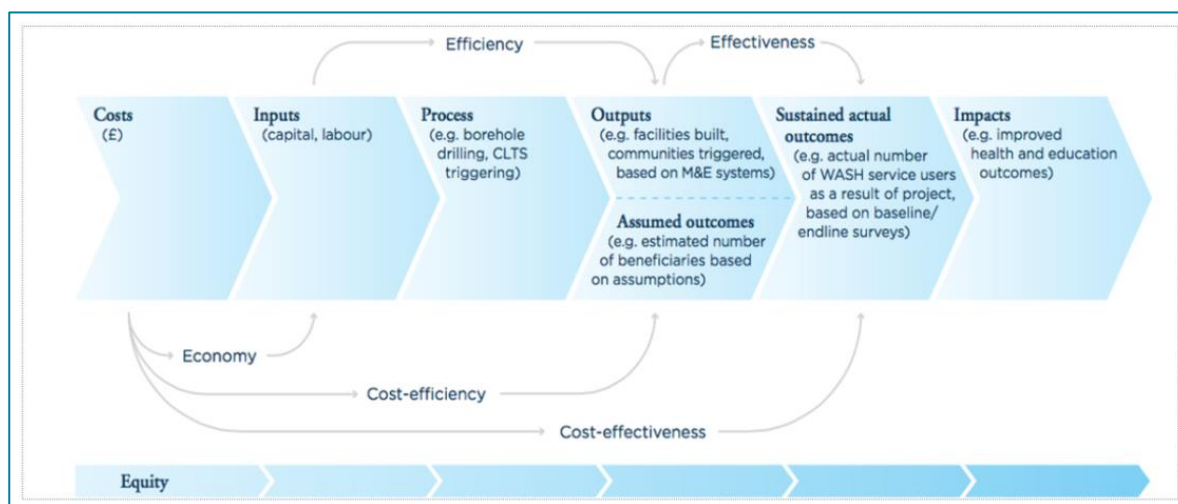
This first learning note provides a framework and proposal to conduct a more in-depth analysis once service level data and expenditure figures are made available through a mid-line assessment (later in 2016) and analysis of contracts and financial reports of the ONEWASH Plus programme.

Cost categories for analysis

Capital expenditure (CapEx) hardware: Costs of construction of infrastructure incurred by the programme partners and the government of Ethiopia. Analysis of contracts and financial reports will provide an overview of these costs and additional information will be collected through the midline survey.

Capital expenditure (CapEx) software: Pre-feasibility costs, design costs and one-off capacity building and training costs. An assessment of contracts and financial reports will provide the overview of these costs.

Figure 1: DFIDs Value for Money framework



Recurrent expenditure: Minor and major operation and maintenance costs. Part of these costs will be collected through the mid-line surveys with utilities and households. It's too early in the programme to consider rehabilitation costs and other large and unexpected replacements.

Direct support: Ongoing support of all development partners involved in the programme and local government staff to ensure services are sustainable.

Analysis of outcomes for each dollar invested

The outcomes of the programme will be assessed in terms of:

- Number of people reached in the service area
- Equity of service provided
- Quantity of service provided
- Quality of service provided
- Reliability of services
- Affordability of services

This information will be collected through a mid-line (and later an end-line) survey. The impacts on health and education will only be assessed at the end-line.

Other cost studies for comparison

There are few published cost studies available for small town water supply programmes against which to compare ONEWASH Plus costs. There are even fewer sources for sanitation. This section compiles the costs of different programmes that we have been able to identify. With few exceptions the information presented here is not available online. These costs cannot be considered benchmarks as they are indicative only and not directly comparable.

Comparing expenditure for urban WASH in Ethiopia

The World Bank project appraisal for urban water (2014) included the following per capita

costs of water supply provision for towns of different sizes:

Population	Per capita cost (US\$)
<1,000	90
5,000 to 15,000	80
15,000 to 20,000	75
20,000 to 30,000	70
30,000 to 50,000	65
50,000 to 100,000	60
100,000 to 200,000	55
200,000 to 500,000	50
500,000 to 1,000,000	49
>1,000,000	46

For urban sanitation additional information is given on the different components (unit costs US\$), but information on the expected population served is not provided:

Description	Small towns	Large town
Construction of new latrines and HWF for public latrines	18,940	18,940
Rehabilitation of public latrines and HWF	1,000	1,000
Construction of new latrines and HWF for communal latrines	6,180	6,180
Rehabilitations of communal latrines and HWF	1,000	1,000
Sludge drying beds	1,545	9,098
3m ³ vacuum trucks	20,384	
5m ³ vacuum trucks		46,590

Water Supply and Sanitation Programme (WSSP) 2008-2013, World Bank

The WSSP aimed to improve urban and rural WASH by building the capacity of stakeholders to plan, construct and maintain water and sanitation infrastructure. The total disbursement was about US\$ 198 million.

In the VfM analysis of this programme conducted by Oxford Policy Management for DFID (Trémolet et Al., 2015), only Capital Expenditure costs were available, and even these were incomplete because they considered only the programme side and not the overall costs of the infrastructure.

Capital Expenditure per person (access only) was US\$ 27 of which US\$ 25 on hardware and US\$ 3 on one-off software expenditure. There is no information on the level of service provided or sustainability.

Table 1 Comparing existing cost data for small, medium and large towns

	Towns/components	Design population	CapEx hardware	CapEx software	Direct & Indirect costs	Total cost	Per capita cost	Currency exchange date	
Small towns in Oromia¹ (2016 study phase) <i>Includes water only; No capacity building; No sanitation</i>	Gindo	17,970	ETB 25,000,000	ETB 1,000,000		ETB 26,000,000	ETB 1,447		
	Tefki	12,897	ETB 26,730,000	ETB 1,000,000		ETB 27,730,000	ETB 2,150		
	Yebu	12,482	ETB 26,158,000	ETB 1,000,000		ETB 27,158,000	ETB 2,176		
	Toba	14,851	ETB 32,000,953	ETB 1,000,000		ETB 33,000,953	ETB 2,222		
	Nopa	6,334	ETB 28,000,000	ETB 1,000,000		ETB 29,000,000	ETB 4,578		
	Totals	64,534	ETB 137,888,953	ETB 5,000,000		ETB 142,888,953	ETB 2,214	USD 101	2016 = 21.91
Hosaena Water Supply Project² (2013) <i>Includes water only; No capacity building; No sanitation</i>	Civil works (Revised)		ETB 22,529,397			ETB 22,529,397			
	Supply of DCI pipes & fitting		ETB 38,991,606			ETB 38,991,606			
	Supply of uPVC pipes & fitting		ETB 16,467,486			ETB 16,467,486			
	Supply of HDPE pipes & fitting		ETB 518,321			ETB 518,321			
	Electromechanical		ETB 8,802,136			ETB 8,802,136			
	Consultancy (Total)			ETB 2,897,370		ETB 2,897,370			
Totals	143,857	ETB 87,308,947	ETB 2,897,370		ETB 90,206,317	ETB 627	USD 34	2013 = 18.71	
One WASH Plus Project Towns (2016) <i>Includes: matching funds regional government; Water supply; Capacity building; Sanitation (landfill, sludge drying bed, vacuum and garbage truck, solid waste collection bins and public and communal latrines)</i>	Welenchiti	45,936	USD 3,856,273						
	Abomsa	37,860	USD 4,033,754						
	Sheno	34,038	USD 3,921,477						
	Maksegnit	28,845	USD 2,682,375						
	Kebridehar (includes Jiggiga solid waste)	56,981	USD 4,500,000						
	Wukro	77,914	USD 5,169,362						
	Adishuhu	23,260	USD 271,429						
Totals	304,834	USD 24,434,670	USD 5,776,908	USD 8,275,283	USD 38,486,861	ETB 2,766	USD 126	2016 = 21.91	
WSSP Small and Medium Town Component³ (2004-2013) <i>Includes: Water Supply, Public latrines; Capacity Building</i>	Totals	1,300,000	USD 120,400,000	USD 6,800,000		USD 127,200,000	ETB 1,924	USD 98	2014 = 19.68
5 Towns Urban Water Supply and Sanitation Project⁴ (IDA and GoE Financing) <i>Includes: Water Supply; Sanitation (not major); Capacity Building significant; Program management; WASH access to low income families</i>	Gonder	200,000				ETB 523,820,314	ETB 2,619	USD 120	
	Jimma	376,835				ETB 311,660,899	ETB 827	USD 38	
	Mekele	243,214				ETB 406,422,224	ETB 1,671	USD 76	
	Dire Dawa	362,116				ETB 685,048,300	ETB 1,892	USD 86	
	Hawassa	371,892				ETB 305,201,487	ETB 821	USD 37	
	Totals	1,554,057				ETB 2,232,153,224	ETB 1,436	USD 66	2016 = 21.91

Sources

1 Planning and Implementation of town water supply and sanitation improvement program, Design Report, July 2016

2 Hosaena Water Supply and Sanitation Project, Design Report, 2013

3 WSSP Project Implementation Completion Report, 2014

4 Ministry of Water, Irrigation and Electricity, Urban Water Supply and Sanitation Project, Progress Report

Main findings on large and small town costs in Ethiopia

Table 1 identifies some recent shared costs for a range of urban WASH projects and programmes.

All include different cost components which reflects the different interventions. However, none of these examples compares the costs with the real outcomes with only the design population being available. This is a major weakness for VfM analysis.

Comparing these per capita costs of various small and large town programmes with the World Bank urban water benchmarks shows that the costs reported are in general roughly double the urban water benchmarks. This is sometimes explained by interventions which also include sanitation and solid waste. There is no apparent relation between the reported costs per capita and the size of the population served (economies of scale).

If we consider only the Capital Expenditure of the small town programmes, there is some convergence around an average cost of US\$ 100 per person for water supply and sanitation services. These are four times higher than the reported costs per person in the VfM analysis of the WSSP (Tremolet et al 2015) which includes both small and medium towns. The Hosaena Water Supply Project seems to be an outlier with the lower per capita costs for infrastructure (US\$ 34).

The OneWASH Plus programme is the only programme, so far, for which information is available on direct and indirect costs. These costs total about US\$ 26 per person.

Procurement process

Procurement processes are critical to analysing efficiency in Value for Money analysis (see Figure 1). In Ethiopia, as elsewhere, challenges in procurement and contract management are major constraints in the implementation of WASH activities. This is when costs are agreed between the client and a contractor, and the type of process followed and its quality will determine whether a project is delivered on time and budget or with over-runs.

One of the major constraints from a contractors perspective is the need to open a letter of credit to be able to import equipment and spare parts. This can take years. It is a disincentive for private sector development and limits the chances for increased competition and lower prices.

A second constraint is related to changes to the design after the contracting works start. Design variations are often required and are allowed. However this can delay contractors in importing and mobilising the necessary materials.

Opportunities to improve efficiency in procurement processes

Aiming to improve efficiency of the procurement process, UNICEF and its partners are trialling a new approach to procurement in the eight towns programme. It consists of bundling four components which are usually separate: drilling works, civil works, mechanical and electrical works, Capacity building (see Learning Note on the Build Capacity Build Transfer approach).

The key informants have mentioned that the main advantages of the new procurement processes include:

- The procurement process is simplified and the tender takes place at one time instead of three or four times.
- The process still flows through national systems but it is packaged differently.
- The study and design phases are shorter. Procurement in the UNICEF eight towns programme was planned for four months but took from five to seven months. The World Bank town project took two years for the study and design phases. Other urban WASH programmes have taken even more time.
- There is a much better integration of water and sanitation. The sanitation component always suffers when the budget needs to be allocated to changes in the water supply component. With this system the sanitation component may not lag behind.
- Management becomes easier with efficient sequencing of activities because there is better integration of implementation processes and changes are addressed on time.

- Reduction of costs with the overall process – mainly in terms of time spend both by contractors, consultants and clients (government) on approvals and follow up.

Procurement challenges to address

- The Regional Water Bureaus and the Town Water Boards need to be better oriented on this integrated procurement processes for it to be truly effective.
- Community participation is absolutely essential and has been lacking. The Regional Bureau and the City Administration should involve the community before the drilling starts.

Conclusions and next steps

At the moment, with the data available, the only finding on costs for small and medium towns in Ethiopia is that from the Capital Expenditure data available, there is some convergence around an average cost of US\$ 100 per person for water supply and sanitation services. This excludes critical costs to ensure sustainability such as capital maintenance and direct support expenditure.

We cannot yet say that US\$ 100 per person is delivering services that match the national norms on access to water and sanitation. The VfM of the OneWASHPlus programme will include all cost components and will compare costs and outcomes of the programme. This will be done using data which to be collected through a mid-line survey in late 2016.

Once the data from the mid-line survey is available the VfM analysis introduced in this note will be completed. A final analysis will take place using additional end-line data when the programme is completed in 2018.

In the meantime, the team also expects to analyse existing cost data from other organisations working in small towns to ensure that more realistic benchmarks can be used for each of the cost components.

The One WASH Plus Programme is thinking about VfM early in the process and is working to ensure it collects the right data. Others may wish to do the same and methodologies could be exchanged to help promote wider application of VfM analysis.

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Learning to do better...

ONEWASH Plus learning notes promote the sharing of experiences from innovations within the ONEWASH Plus Programme, which is funded by the UK Department for International Development (DFID) and implemented by UNICEF, with government and other partners, to help fill specific gaps within the Government-led One WASH National Programme.. This learning note focuses on value for money. It explores definitions, processes, approaches and costing. It was prepared by Catarina Fonseca and Eyob Defere. It was edited by John Butterworth and Tereza Nega.