

The cost of providing water, sanitation, hygiene, waste management and clean environments in health care facilities in Timor-Leste



WaterAid/Fraser Goff



Results of life cycle costing assessment in Manufahi Municipality, Timor-Leste



Executive Summary

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Introduction

Safe, reliable water, adequate sanitation, waste systems and hygiene (WASH) services and behaviours in health care facilities (HCFs), along with safe waste disposal and environmental cleaning, are vital for safe, quality health care provision.

In 2020 Manufahi Municipality in Timor-Leste developed a Municipal WASH Strategy which sets targets for achieving universal WASH by 2030, including in healthcare settings. To support the achievement of this strategy, WaterAid supported Municipal authorities to conduct a participatory exercise to determine the costs of providing WASH services in all 27 government-run HCFs in the Municipality.

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WaterAid and the sector calculated the costs of delivering, and more importantly sustaining water, sanitation, hygiene, waste management and environmental cleanliness services in HCFs (hereafter referred to as WASH in HCF). These costs are termed the life cycle costs and include the initial, one-off costs of installing services and infrastructure (CapEx), as well as the recurring costs to maintain services: operation and minor maintenance (O&M), rehabilitation and major capital maintenance (CapManEx), and the personnel costs associated with running the services (Support Costs).

These life cycle costs were determined at basic level across the five service domains which are recommended in the Joint Monitoring Programme (JMP) framework for monitoring WASH in HCFs: water, sanitation, hygiene, waste management, and environmental cleanliness.

The calculation methodology involved the following steps:

1. Assessment of WASH in healthcare facilities in all 27 health centres in the Municipality.
2. Participatory two-day workshop with sector stakeholders to agree inputs to the life cycle costing.
3. Calculation of the life cycle costs for each HCF in Manufahi as well as total costs at the Municipal Level using an Excel-based tool.

Results

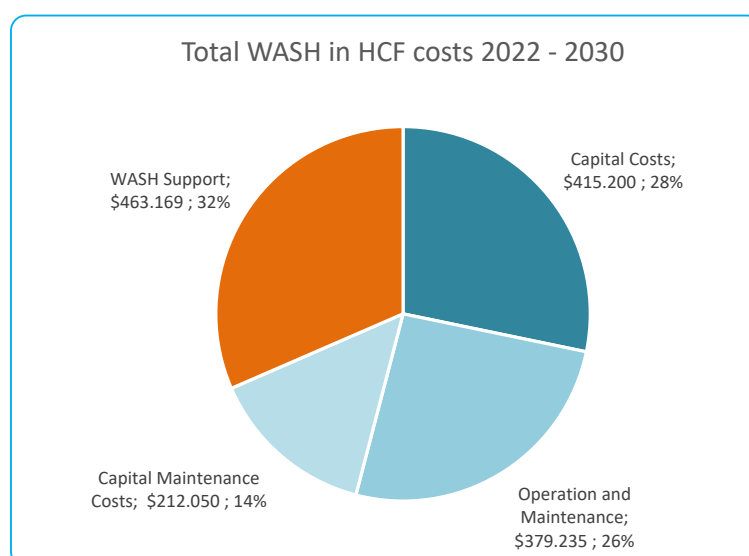
The estimated total cost of providing and sustaining WASH in HCFs in Manufahi from 2022 to 2030 is US\$1,469,654. The largest cost component is direct support – the cost of staff salaries and benefits to provide and sustain the services (see Table i, Figure i).

Table i - Total average investment needed for each service, by type of HCF 2022 – 2030, USD

Service	Average cost per Community Health Centre	Average cost per Health Post
Water	\$ 12,749	\$ 7,962
Sanitation	\$ 29,200	\$ 20,494
Hygiene	\$ 7,300	\$ 2,987
Waste Management	\$ 711	\$ 709
Environmental Cleaning	\$ 3,850	\$ 2,250
Support Costs*	\$ 49,749	\$ 8,731
Total	\$ 103,559	\$ 43,133

* Note: This is HCF-level support costs only and excludes the support costs from the Municipal departments, which is an estimated cost of \$63,360 over the analysis period

Figure i - Life Cycle Cost Components for WASH in HCF in Manufahi 2022-2030, USD



On average, each Community Health Centre and Health Post requires approximately US\$15,000 in one-off capital investment to meet minimum basic service levels, as well as recurrent annual costs of approximately US\$10,000 for Community Health Centres and US\$3,000 for Health Posts every year (Table ii). Based on the Manufahi population from the 2015 census this represents costs of US\$7.74 per capita for capital investment, and US\$2.05 per capita for recurrent costs.



Table ii – Average investment needed for each life cycle cost, by type of HCF 2022 – 2030, USD

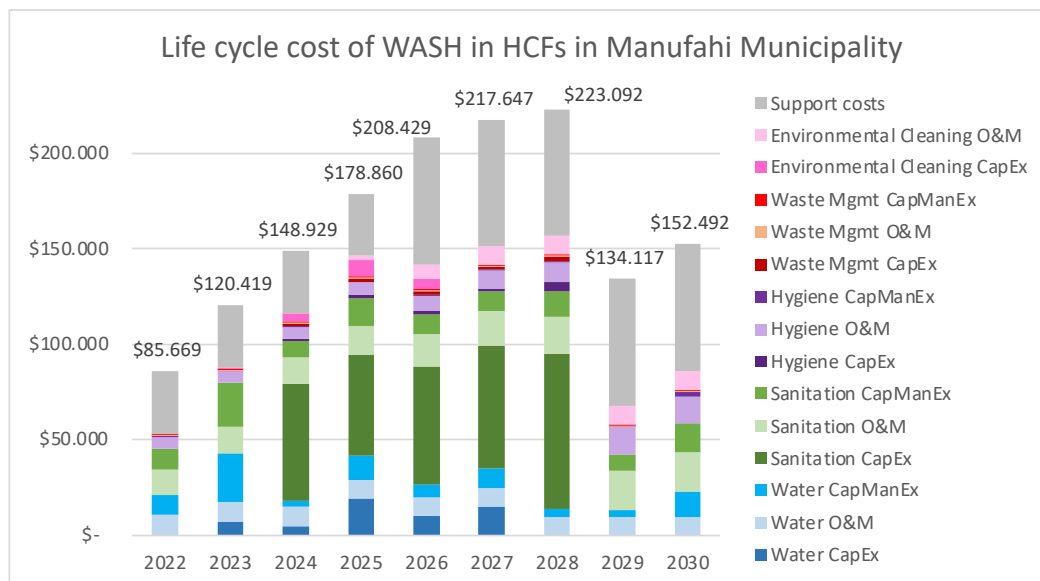
Life cycle cost category		Average cost per Community Health Centre	Average cost per Health Post
Capital investment	Capital Costs	\$ 14,863	\$ 15,467
Recurrent annual costs	Operation and Maintenance	\$ 3,128	\$ 1,288
	Capital Maintenance Costs	\$ 1,199	\$ 816
	WASH Support*	\$ 5,528	\$ 970
	Subtotal: Recurrent annual costs	\$ 9,855	\$ 3,074

* Note: This is HCF-level support costs only and excludes the support costs from the Municipal departments, which is an estimated cost of \$63,360 over the analysis period

We also calculated the total cost per year for the Municipal Government between 2022 and 2030 based on expected timelines for upgrading infrastructure, the expected lifespan of infrastructure before it requires rehabilitation, and the roll-out of training for cleaning protocols (Figure ii). The largest annual cost has been determined as US\$223,092 in 2028, with recurring costs in 2029 and beyond between US\$130,000 and US\$155,000.



Figure ii - Full life cycle costing estimates for WASH in HCF in Manufahi 2022 – 2030, USD



Recommendations

The current budget for WASH in HCFs in Manufahi is insufficient to address health risks. In order to adequately fund WASH in HCFs we recommend the following

1. The national budget, prepared by the Ministry of Health, and approved by the National Parliament, should allocate at least US\$7.74 per capita for capital investment in WASH in health care facilities, and US\$2.05 per capita for recurrent costs of sustaining WASH in health care facilities.
2. Within financing, priority needs to be given to adequately staffing support to WASH services in health care facilities, including cleaning, operation, maintenance, behaviour change promotion and capacity development.
3. The national Ministry of Health and Ministry of State should work together to clarify the roles and responsibilities for financing the various components of WASH in health care facilities to ensure finance flows are more effective and transparent.
4. The Manufahi Municipality Administration should use these costings to prepare an updated costed plan with annual budget allocations needed to achieve universal WASH in health care facilities for the whole municipality.
5. A national protocol/guideline and associated municipality-wide roll-out program should be developed to establish cleaning protocols, responsibilities and training for environmental cleanliness in every health care facility, linked with quality assurance processes.

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Cover photo: Bubususu Health Post staff at their accessible toilet and handwashing facility in Bubususu, Manufahi.