



REPUBLIC OF UGANDA

MINISTRY OF HEALTH
ENVIROMNENT HEALTH DEPARTMENT

THE COST OF INACTION ON WATER, SANITATION AND HYGIENE



OCTOBER 2026



REPUBLIC OF UGANDA

MINISTRY OF HEALTH
ENVIROMNENT HEALTH DEPARTMENT

THE COST OF INACTION ON WATER, SANITATION AND HYGIENE

OCTOBER 2026

Table of Contents

FOREWORD.....	1
ACKNOWLEDGMENTS	2
EXECUTIVE SUMMARY	6
LIST OF ACRONYMS AND ABBREVIATIONS	13
WORKING DEFINITIONS	15
SECTION 1.0: INTRODUCTION.....	16
1.1 THE CONTEXT	16
1.2 OBJECTIVES OF THE STUDY	17
1.3 LINKING WASH TO SOCIOECONOMIC OUTCOMES.....	17
1.4 METHODOLOGY	21
1.5 STRUCTURE OF THE REPORT	23
SECTION 2.0: POLITICAL, GOVERNANCE AND INSTITUTIONAL CONTEXT	25
2.1 THE POLICY AND LEGAL FRAMEWORK	25
2.2 THE INSTITUTIONAL FRAMEWORKS	25
2.3: MAPPING OF KEY STRATEGIC PARTNERS SUPPORTING THE SECTOR	28
SECTION 3.0: THE STATUS OF WASH IN UGANDA.....	30
3.1 WASH AT NATIONAL AND COMMUNITY LEVELS.....	30
3.2 EFFECTS OF CULTURE ON WASH AT COMMUNITY LEVEL.....	32
3.3 WASH IN SCHOOLS.....	32
3.4 WASH IN HEALTH CARE FACILITIES.....	33
3.5 WASH IN WORK OR BUSINESS AREAS.....	34
SECTION 4.0: COST OF NO-ACTION TO INCREASING WASH FINANCING.....	35
4.1 BACKGROUND TO THE ESTIMATION PROCESS	35
4.2 MICRO ANALYSIS OF COST IMPLICATIONS OF KEY DISEASES	37
4.3 COMPUTATION OF COST OF NO-ACTION ASSOCIATED WITH KEY DISEASES	38
4.4 ANALYSIS OF THE MACRO LEVEL COSTS OF INACTION	39
4.5 SCENARIOS FOR IMPACTS OF FUTURE INACTION AND ACTION	41

SECTION 5.0: WASH FINANCING IN UGANDA	44
5.1 THE PRACTICE OF WASH BUDGETING IN UGANDA	44
5.2 COMPUTATION OF FUNDING FOR WASH IN UGANDA	45
5.3 THE PUBLIC SECTOR BUDGETS	47
5.3 MAJOR COMPONENTS OF WASH EXPENDITURE	48
5.4 ALLOCATION OF BUDGETS TO THE DIFFERENT WASH SERVICES	49
5.5 CHALLENGES TO PUBLIC SECTOR FINANCING	49
5.6 A REVIEW OF THE EXTERNAL BUDGET FOR WASH	50
SECTION 6.0: CONCLUSIONS AND RECOMMENDATIONS	52
REFERENCES	56
ANNEXURES	57
ANNEXURE 1: SUMMARY OF DERIVED WATER SUPPLY AND USE INDICATORS, 2015 – 2024	57
ANNEXURE 2: SDGs ON CLEAN WATER AND SANITATION	57
ANNEXURE 3: ESTIMATION OF UNIT COSTS FOR SELECTED WATER-BORNE DISEASES	58
ANNEXURE 4: THE KEY INVESTMENT AREAS	59
6.2 PRECONDITIONS FOR INCREASED WASH FUNDING	60
6.3 THE FUTURE OF WASH REQUIRES MORE FUNDING	61
6.4 SOURCES OF FUNDS	62
6.5 DEVELOPMENT OF A WASH INVESTMENT FINANCING STRATEGY	63

List of Acronyms and Abbreviations

CAPEX	Capital Expenditure
CBA	Cost-Benefit Analysis
CSOs	Civil Society Organizations
DALYs	Disability-Adjusted Life Years
EPRC	Economic Policy Research Centre
GDP	Gross Domestic Product
HCFs	Health Centre Facilities
HMIS	Health Management Information System
MDAs	Ministries, Departments and Agencies
MHH	Menstrual Health and Hygiene
MoES	Ministry of Education and Sports
MoH	Ministry of Health
MoLG	Ministry of Local Government
MWE	Ministry of Water and Environment
NDP	National Development Plan
NGOs	Non-Governmental Organizations
NPA	National Planning Authority
NWR	Non-Wage Recurrent
NWSC	National Water and Sewerage Corporation
O&M	Operations and Maintenance
OOP	Out-of-pocket
OPEX	Operational Expenditure
OPM	Office of the Prime Minister
PHC	Primary Health Care
SDGs	Sustainable Development Goals
UNICEF	United Nations International Children's Emergency Fund
WASH	Water, Sanitation, and Hygiene

Foreword

Access to safe Water, Sanitation, and Hygiene (WASH) is not only a human right, it is a fundamental **investment** in Uganda's social and economic transformation. It's also a cornerstone for safe and effective health service delivery. Over the past decade, the Government of Uganda and its partners have made important strides in expanding WASH services, strengthening the policy and institutional framework, and aligning national priorities with global commitments. However, this report clearly demonstrates, the pace and scale of investment remain far below what is required to safeguard public health, protect human capital, and sustain inclusive economic growth.

This Cost of No Action to WASH Financing report provides timely and compelling evidence on the heavy burden that inadequate WASH services place on households, communities, and the national economy. It shows that gaps in access to safe water, sanitation, and hygiene translate into an estimated loss of at least US\$ 177 million annually, through preventable disease, lost productivity, premature death, and forgone learning outcomes for millions of children.

It further illustrates how inadequate WASH services disproportionately affect women, children, and poor households, deepening existing inequalities and undermining progress towards Uganda's Vision 2040.

This is a costly policy choice which undermines Government's 10-fold Growth Strategy that seeks to enrich lives for transformative and sustainable economic growth. Conversely, scaling up investments in climate-resilient and inclusive WASH services offers substantial benefits, including reduced health expenditure, higher economic output, better education outcomes, and stronger resilience of communities to climate and other shocks.

This report therefore, provides policy and decision-makers with quantitative evidence for better-targeted WASH financing decisions. It also offers development partners, civil society, the private sector, and community actors a shared platform for advocacy, dialogue, and accountability around increased, predictable, and well-coordinated resources for WASH

I therefore urge all stakeholders to use the evidence and scenarios presented in this report to inform immediate action: to prioritize WASH in national and local budgets, to strengthen efficiency and equity in resource allocation, and to foster innovative partnerships and financing mechanisms that can unlock the full potential of the sanitation economy in Uganda. This will help avert the effects of catastrophic expenditure on health and hence build a healthy and productive population to steer Uganda's economy.

For God and my Country

Dr. Chris Baryomunsi
Minister for Health

Preface

The Government of Uganda is committed to ensuring healthy and productive lives that contributes to socio-economic development. In recognition of WASH (Water, Sanitation and Hygiene) as not just matters of personal health; but also critical components of public health, a pillar to primary health care service delivery and socio-economic transformation; A number of strategic interventions have been implemented to ensure access to equitable and effective WASH services in communities, healthcare facilities, training institutions and public places.

This notwithstanding, the population is continually exposed to undignified living conditions hence pressing a huge burden of disease due to preventable causes to Uganda's health sector. In addition, the country continues to suffer from a number of disease outbreaks due to its placement within multiple epidemic belts coupled with high population growth rates. For instance, almost 60% of Uganda's preventable disease burden is linked to poor sanitation and hygiene. These continue to strain public health budgets and disrupt Uganda's economy by lowering the productivity of the population and paralyzing trade and tourism.

The Cost of Inaction report on WASH financing therefore comes in handy to uncover the true cost of diseases and death, financial and social loss by sector as well as demonstrating the Return on Investment. For instance, the report indicates that access to WASH services have caused negative effects on the Ugandan economy estimated at US\$ 177 million. On the contrary, The Sanitation and Hygiene Fund (SHF) estimated that the sanitation economy in Uganda can increase from US\$ 1.724 billion in 2022 to US\$ 2.7 billion by 2030 given the right investment.

This report therefore provides tangible evidence which is timely now when Uganda's population is increasing exponentially with the rising burden of preventable diseases and recurrent public health outbreaks. This therefore calls for targeted and meaningful planning, budgeting and financing if the country is to meet its national goal of ensuring universal health coverage through health promotion and disease prevention.

I therefore call upon all stakeholders including the line Ministries, Departments and Agencies, Donors, Development partners, Civil Society Organizations, religious leaders, cultural and traditional leaders and the general public to prioritize this critical pillar for dignified living and socio-economic transformation.

Our success in this transformative agenda therefore lies in strengthened collaboration and partnerships, that attract increased public and private sector investments to the WASH sector.

This will ultimately foster the national strategies of reducing the burden of disease due to preventable causes hence steer efforts towards attaining health for all Ugandans for happier and productive populations.

Dr. Diana Atwine

Permanent Secretary, Ministry of Health

Acknowledgments

The Ministry of Health extends sincere gratitude to the Ministry of Water and Environment, Ministry of Education and Sports, Ministry of Finance, Planning and Economic Development, Ministry of Works and Transport, Ministry of Defense and Veteran Affairs among others for contributing to this study. The contribution of the Development Partners, Implementing Partners and Civil Society Organizations was a valuable input to this process. We also appreciate the Sanitation and Water for All (SWA) country team for the technical guidance to this whole process.

The Ministry of Health also extends appreciation the Uganda WASH parliamentary forum for the insightful contribution to this study.

Special thanks to the Sanitation and Hygiene Fund (SHF) for financing this study through Water For People Uganda.

We also thank the Economic Policy and Research Center (EPRC) of Makerere University Uganda for leading this fundamental study. The process of undertaking and enriching this study was fully participative and hence we are confident that findings will offer a clear policy direction for shaping the country's WASH agenda.

We look forward to collaboratively working with both public and private stakeholders to ensure reduction in the economic burden of disease, healthcare costs and hence improving the quality of productivity for socio-economic transformation.

Dr. Olaro Charles

Director General Health Services

Working definitions

1. **Cost of inaction** refers to the social, economic, and monetary losses associated with the inability of government and partners to increase funding for WASH services to the required levels. The low levels of current funding have negative impacts or costs on the economy that will continue to increase if no action is taken. These include loss of life, reduced number of working hours and labor productivity, increased costs of treating the sick, and absenteeism from school.
2. **Benefits of action** refer to the reductions in social, economic, and monetary losses arising from the action of increasing funding to the WASH sector. The benefits include, not only the reduction in the losses described in No. 1 above, but also the gains in form of increased working hours, labor productivity, less absenteeism, and savings from costs of treatment by government and households that are then invested in other wealth-creation ventures.
3. In the TrackFin methodology used to identify sources and levels of funding for WASH services, the following definitions apply:
 - a. Users include households, institutions, commercial, industrial entities that pay for WASH service providers and/or self-provide services such as on-site water and sanitation systems. They may pay up-front to construct a WASH facility/investment (private latrine, rainwater tank or sewerage system) and/or purchase services from available providers such as water trucks/bousers, or NWSC. They may also pay other recurrent costs such as the purchase of soap, hygiene products, and water treatment products.
 - b. Network corporate providers include utility companies that own and/or operate facilities for production and distribution of WASH services through network systems for the public, as well as for bulk services. They may be privately or publicly owned, mandated or independent, large, medium- or small. They either provide a public service or provide the service for their own use (self-provide).
 - c. Non-network corporate are providers of any small-scale WASH goods (e.g. bottled or sachet water) or services along the value chain through non-network systems. They usually involve low-skilled labour and a low level of initial investment. They may take various organizational forms from cooperatives to small businesses and may be formal or informal. This category includes real estate developers.

Executive Summary

The objective of the report is to provide quantitative estimates of the cost of taking no action to increasing the funding and investments in the WASH sector for Uganda. The inadequate provision of WASH services has cost implications on society and the economy that need to be recognized by decision makers who must act by increasing the funding. The evidence on the effects of poor WASH services on the rest of the socioeconomic aspects in the country shows the need for an integrated approach that requires all stakeholders and actors to support the desired increase in the funds. Inadequate WASH services often manifest in various forms including limited wealth creation, persistent or increased poverty, and low labor productivity and growth, increased diseases burdens and costs of treatment as well as poor indicators of education outcomes.

The report provides evidence to show that gaps in access to WASH services have caused negative effects on the Ugandan economy estimated at US\$ 177 million. The value could be higher given the multiplicity of the direct and indirect outcomes and impacts of WASH on the wellbeing of both humans and the economy. Future growth is expected to be undermined if the relevant funding is not realized. The Sanitation and Hygiene Fund estimated that the sanitation economy in Uganda can increase from US\$ 1.724 billion in 2022 to US\$ 2.7 billion by 2030 given the right investment.

The policy, legal and institutional framework

The delivery of WASH services in Uganda is rooted within a strong political, governance and institutional context with strong policy and legal framework. WASH is implemented within a coordinated framework that encompasses stakeholders from the government, communities, Development Partners, Non-Governmental Organizations, Civil Society Organizations, and Academia. The policy goals and strategic objectives reflect both local and global aspirations. At the local level, the WASH programming is informed by Vision 2040 and the National Development Plan. At the global level, Uganda is aligned to the Sustainable Development Goals (SDGs) by the United Nations and Agenda 2063 of the African Union.

The WASH agenda is driven under the Human Capital Development (HCD) of the National Development Plan IV (NDP). This brings together the line Ministries of Health, Water and Environment, Education and Sports, Local Government, Gender Labor and Social Development. Other Agencies include the National Water and Sewerage Cooperation (NWSC) National Environment Management Authority (NEMA) among others.

There are several forums for discussing the planning, budgeting and implementation for WASH including the Uganda Parliamentary WASH (UP-WASH) Forum. The Uganda Water and Sanitation NGO-Network (UWASNET) coordinates all the Civil Society Organizations in the WASH sector while supporting advocacy, planning, funding, implementation, and monitoring of sector progress.

An exercise of mapping the stakeholders to identify who plays what role in managing the competing interests and associated influences revealed the following:

- a) Several key stakeholders, such as security agencies who are large consumers of WASH and have power to influence national decisions in favor of WASH, have not been adequately engaged. The Uganda Peoples' Defence Forces, Uganda Police Force, Uganda Prisons among other institutions build and consume WASH services.
- b) The Health National Action Plan (H-NAP) should increase the scope of engagement beyond the current stakeholders. There is a need to deepen engagement and interest of powerful actors like MoFPED that are considered as a low-hanging fruit.
- c) Continuous engagement is necessary for certain institutional stakeholders such as Parliament whose membership changes very often.
- d) Sharing information, including this report, should target all stakeholders.

Implications of inadequate WASH services

Almost 60% of the preventable disease burden is estimated to be linked to poor sanitation and hygiene. There is a relatively higher frequency of illness among children that is linked to inadequate access to safe water and handwashing facilities. It was noted that, although majority of households have toilets, about 90% did not have tap water for washing hands after using the toilet, 82% got water from taps and tanks, and 62% had no proper sanitation.

The lack of adequate WASH infrastructure in schools did not only reduce attendance and academic performance but also increased the risk to infections due to poor menstrual hygiene and absenteeism of girls. If WASH improves outcomes in education and health, they will translate into higher labour productivity, economic growth, reduced poverty, and less inequality in the country. In the health sector, poor WASH services result in high medical costs, or even death that can expose the country to social risks and political discontent.

Status of WASH in Uganda

The proportion of the population using safely managed drinking water services in urban, rural, and at national levels was 80.5%, 81%, and 80.8% respectively. About 81% of the households had access to an improved source of drinking water while 18.9% were using unimproved sources of drinking water. In urban areas, 86.6% of households had access to an improved water source compared to 77.4% in rural areas. Boreholes are the main source of drinking water for 25% of households in urban areas and 48.9% in rural areas with a national average of 39.2%. The proportion of households with improved sanitation facilities was relatively higher (60.9%) in urban households compared to 31.8% in rural areas.

Cultural beliefs, practices and types of livelihood activities influence the availability, access, and use of WASH services by communities with some resisting adoption of better sanitation practices. Socioeconomic aspects such as gender discrimination, and inequality in incomes and social power relations influence decisions that affect access to adequate hygiene facilities.

Rapid urbanization has strained existing WASH infrastructure and created service gaps in many facilities like markets and shopping centers in towns and cities. Although waste treatment in the country increased 30-fold between 2003 and 2015, only about 50% of the daily garbage in Kampala was collected.

The education sector is a critical driver of the status of WASH in the country as it regularly engages more than 14.7 million learners and close to 300,000 teachers, excluding non-teaching staff, which is almost 33% of the total population. Although 58% and 73% of the primary and secondary schools, respectively, had access to water, there were no hand-washing facilities in at least 44% and 33% of the two categories of institutions. About 42% and 27% of primary and secondary schools did not have access to safe water while only 21% of the schools had MHM facilities that met the national standards.

Health Care Facilities (HCFs) showed disparities with 45% and 55% of the facilities having basic and limited water services respectively. Access to improved and usable sanitation was in 75% of the HCFs. Hand washing services were in 76% and 68% of the HCFs in rural and urban areas respectively. *Efforts to realize environmental health and sanitation have been constrained by limited funds for both government and households. Health inspectorate staff cannot enforce the laws and regulations while households and small businesses have not invested enough to meet the standards.*

Inadequate WASH services expose newborns and their mothers to unhygienic practices and infections that lead to poor health outcomes such as low birth weight and miscarriages, or even death of both mother and baby. Infections related to poor hygiene, and inadequate safe and clean water kills 2.7% of the babies within four weeks (28 days) of birth. Diarrheal, which is a leading cause of death and illness, especially among children under five, kills 33

children every day with over 4,500 children under 5 years estimated to die from diarrheal diseases every year.

Acute respiratory infections affect about 67% of the children under five who seek treatment from HCFs. Neonatal sepsis is linked to unhygienic handling of newborns at birth, contributing to 31% of deaths that happen within four weeks of birth while other children get stunted. Reports showed that 24.4% of the children under 5 years are stunted, partly due to lack of access to clean water and good sanitation.

Quantification of Costs of Inaction

The Cost-Benefit Analysis (CBA) and comparative analytical approaches were adopted to identify and quantify the costs of inaction and benefits of action to increase funding for WASH. The benefits, some of which arise from reversed costs due to increased investments, include improved social outcome indicators, reduced costs of treatment, higher labor productivity, and economic growth.

The treatment costs for cases of water-borne diseases such as cholera, typhoid, dysentery, and diarrhea were estimated at UGX 1.658 trillion. Furthermore, based on estimates of 30% of the cases not being reported in the HCFs, the total cost of treating the above diseases increased to UGX 2.155 trillion. On the other hand, the benefits of acting by increasing funding for WASH investments over the next five years to levels that reduce the disease burden by 80% would translate into savings on treatment costs by both government and households worth UGX 1.724 trillion.

The MoH and EPRC estimated the annual loss due to death and ill-health that translates into low productivity to be UGX 4 trillion and UGX 5.9 trillion (2.9% of GDP) respectively. In addition, the EPRC estimated the time spent seeking healthcare or fetching water, which reduced engagement in both income-generating activities and education, to be equivalent to UGX 0.5 trillion.

Based on comparisons with Tanzania, the time lost due to sickness per person/capita in Uganda was equivalent to US\$ 16 while the treatment costs were US\$ 10. The comparison took note of the fact that, in Tanzania, growth of GDP relied more on factor productivity (created losses of US\$1.4 billion or 1.9% of GDP) compared to Uganda where GDP growth is largely driven by investments in the stock of capital infrastructure by both public and private. About 35% of the health costs were borne by women, children under five, and poor households. Majority of the losses (73%) were in rural areas partly due to the fact that they accommodate most people, and services are more inadequate and dispersed with longer access times compared to urban areas.

The report provides trajectories of possible future reductions in the costs based on different scenarios for the period 2025 (base year) to 2035. Analysis of possible future trends were based on household survey data and TrackFin WASH results under three scenarios of: no action or inaction (no increment in of investment for the provision of WASH services); increases in investment by at least 50% and 75% for the second and third scenarios respectively. The baseline figure for the size of the economy in 2025 was US\$ 54 billion and presumed to grow at 10% over to US\$ 140.06 billion in 2035.

The 1st scenario indicates the costs will continue to increase by US\$ 200 million per year till 2035. However, an increase in the investment of 50% will translate into reductions in the losses of US\$ 50 million per year, increasing to US\$ 2.5 billion in 2035. The corresponding decreases in the costs associated with an increase in investments of 80% will decrease the losses by US\$ 120 million per year that will amount to US\$ 3.2 billion by 2035 compared to if the status quo was maintained. The total costs of inaction to increase funding for investments related to delivery and usage of WASH services over the period 2026 – 2035 is US\$ 27 billion. This loss would reduce to US\$ 13.25 billion and US\$ 9.4 billion if the funding levels are increased by 50% and 80% respectively.

The reductions in losses are due to savings in form of costs associated with medical care and death across all ages, and related benefits of increased productivity for the age group of 15 and above, and greater economic growth. Other sources of positive gains include reduced time for accessing WASH services and elimination of open defecation.

Sources of financing for WASH

The major sources of funding for WASH based on the TrackFin methodology include both Central and Local Governments, Multi-lateral and Bi-lateral development partners, Financial institutions, Network such as NWSC, Non-network corporate providers, NGOs and CBOs, and Self-providers or users who include households and institutions (commercial, industrial, etc.).

The estimated total WASH expenditure from all these sources increased from UGX 2.15 trillion in 2016/17 to UGX 2.37 trillion in 2020/21 before declining to UGX 2.14 trillion in 2021/22. The DPs contributed more than 60% of the sources from Government that were mainly used for capital expenditures. The African Development Bank (AfDB) has generally been the major on-budget financier of the WASH sector over the years with focus on Water supply services. Financing from Development Partners has been increasing as a component of the entire budget with its contribution reaching 50 – 70% in some years. The external budget releases increased from 50.5% in 2019/20 to 71% in 2022/23, which can undermine budget credibility and sustainability.

The bulk of the budget (over 49 – 50%) was allocated to capital investments followed by O&M (19 – 24%) and support activities (6 – 22%). In 2023/24, the largest share (58.1%) of the budget was directed to capital development with only 2.7% spent on O&M. A very small component of the total budget was allocated to water resource management and support services to the WASH sector. Close to 90 % of the WASH budget for 2022/23 was directed towards constructing medium and large water systems, installing new boreholes, and undertaking other projects.

The findings also show additional items that are often not reflected under WASH spending records. These include taxes (4 – 6%) and financial costs such as interest on loans and bank charges (4 – 6%). Taxes are mainly on utility charges, project implementation and a range of inputs.

Despite the general upward trend in allocations over the last decade, the amounts are still below the planned NDP annual financial requirement of over UGX 5.1 trillion that is expected to increase to UGX 10 trillion by 2030. The trends reveal several challenges in areas of sustainability and adequacy of budgets. The sector still faces a significant challenge in aligning actual financial releases with approved budgets due to significant budget cuts. In 2018/19, 2019/20, 2020/21, and 2021/22, the budget for MWE experienced shortfalls in the approved budget of -4.4%, -31.2%, -43.8% and -22.0%, respectively.

The allocations to recurrent spending are not adequate monitoring the delivery and use of WASH services. Limited funding for O&M undermines sustainability of the infrastructure making it unfunctional in the medium to long-term.

In addition, only 9% of the Primary Healthcare Non-recurrent wage in the approved budget of 2026/27 for the MOH is ring-fenced for sanitation and hygiene interventions in communities within the healthcare facility catchment. This is inadequate for the critical aspects of behavioural change interventions and sensitizations required for achieving improved sanitation and hygiene.

Conclusions and Recommendations

Inadequate investment for the provision of WASH services has wide-ranging negative implications on the wellbeing of the population and the economy. It increases diseases burdens and the associated costs of treatment, as well as absenteeism from school. The negative impact on human capital translates into loss of labor productivity and low economic growth, which undermines the broader national goals of socio-economic transformation and transition to middle income status. Accordingly, the need for increased funding for WASH should be supported by everybody regardless of their core sector of interest. Specifically, additional investments are needed in sectors with large numbers of people like education, health, security, markets as well as rural communities across more than 71,000 villages in the country.

Areas for investment to be funded

- 1) Water supply to improve sources, rainwater harvesting, treatment and storage, as well as regular cleaning and disinfection of sources and dispensers.
- 2) Sanitation facilities including climate resilient toilets for better user-to-stance ratios that are sex-segregated and provide for People With Disabilities (PWDs), needs for Menstrual Health and Hygiene (MHH), and routine maintenance, solid waste and healthcare waste disposal
- 3) Hygiene promotion to cover handwashing facilities with soap at critical points, raise hygiene awareness and behavior change among communities, as well as inspection and monitoring to ensure appropriate enforcement.
- 4) Planning that includes needs assessments, designs of projects and budgets, implementation and monitoring for desired results.

Preconditions for increasing WASH budgets.

- 1) The President, as the most important stakeholder, should direct all the MDAs to commit and exclusively budget to deliver WASH services to the agreed national service standards. Strong political will and leadership from the President will harmonize the divergent interest of the different power centres.
- 2) Commit to ringfence financing for both hard ware and software Water, Sanitation and Hygiene services in communities, healthcare facilities, training institutions and public places. A proposed 1.5% growth rate should be maintained for the next ten years (2026/26 - 2035/36) in the current budgets of MOH, MWE and MOEs. This will enable the respective Ministries fulfil their respective mandated roles in improving WASH services; healthcare facilities, communities, public places and training institutions.
- 3) Develop national guidelines to strengthen the coordination of MDAs/LGs, private sector, NGOs/CSOs, and DPs with clear specifications of roles and responsibilities of all stakeholders. The oversight function by the Parliament must be emphasized.
- 4) Increase engagement with the private sector and communities to increase both production and consumption of WASH services. Government should commit a specific part of the budget to sanitation hygiene to enforce and supervise adherence to agreed standards.
- 5) Develop a strategy to deliberately increase the human resource capabilities of all resourceful personnel in the sector for health promotion and disease prevention, construction and maintenance of WASH projects, financing, regulation and stakeholder engagement. In addition to supporting better and continued functionality of existing systems, the R&D will result in new appropriate WASH delivery business models and how best to finance and operationalize them.

- 6) Strengthen and integrate the analog and digital data collection and management systems for tracking financing, implementation and results across all aspects and sectors in the country.
- 7) Develop a clear and effective communication strategy to provide information on sources and levels of funding, progress on implementation of WASH plans, results, and gaps for future action.

Development of a WASH Investment Financing Strategy

Uganda lacks a comprehensive WASH strategy to guide all stakeholders, scattered across the public and private sector, who are supposed to make decisions on the nature and scale of investments in WASH. Large shopping malls, markets and office premises in urban areas have restricted access to resident users and hardly any access to clients/customers, several banking halls do not have provisions for clients, highways have no official provisions for WASH facilities and low-income communities in urban areas (slums) and rural areas lack the required facilities.

The required investments are not only physical structures, hardware, but also software aspects. The latter include behavioral change facilitation; continuous sensitization, systems for the management and accountability of finances; monitoring, evaluation, and incorporation of lessons learned into subsequent strategies.

It is within the above context that the report recommends a detailed comprehensive assessment to establish the gap between the status and the desired quantity and quality of services to inform the magnitude and scope of the required financing. The strategy to raise the required financing should leverage the evidence provided in this report on **“the cost of inaction”** to achieve the following two aspects:

- 1) The decision to increase financing for the provision of adequate WASH services on a sustainable basis.
- 2) Commitment by all stakeholders in Government, Development Partners, Civil Society Organizations, private sector and communities to find the required resources.

SECTION 1.0: INTRODUCTION

1.1 The Context

Water, sanitation, and hygiene (WASH) services are fundamental to public health, human capital development, economic productivity, and climate resilience, and are therefore a core pillar of Uganda's development agenda. Uganda has demonstrated strong political commitment to advancing the WASH agenda through policy reforms, institutional strengthening, and targeted investments. Key initiatives include the Presidential pledge to provide at least two safe water sources per village, implementation of a costed Sector Investment Plan, and integration of climate risk considerations into planning and investment decisions. WASH is firmly embedded as a strategic priority in the National Development Plan IV (2025/26–2029/30) and Uganda's Nationally Determined Contribution (NDC 2.0), reflecting a commitment to climate-resilient and sustainable service delivery.

Despite these efforts, inadequate financing remains the most significant constraint to achieving universal access to sustainable WASH services. Current public investment falls far short of requirements, with underinvestment costing Uganda an estimated 2.9%¹ of GDP annually due to disease burden, productivity losses, healthcare costs, and adverse social outcomes such as school dropouts among adolescent girls. The financing gap is expected to widen significantly by 2030, underscoring the need for increased political commitment, mobilization of non-conventional and private financing.

A report by the World Bank (2013)² indicated that neglecting the gaps in access to WASH services had potential negative effects on the economy, which were estimated at USD 177 million for Uganda. The value could be higher given the multiplicity of the direct and indirect outcomes and impacts of WASH investments on the wellbeing of both humans and the economy. Poor access to WASH services is a big public health risk that can translate into outbreaks of preventable water-borne disease such as cholera, increase costs of medical treatment, cause premature deaths and compromise the quality of healthcare services delivery. It can also cause stunting of children, dropping out of school especially girls, loss of productivity by workers due

to illness, and time spent seeking medical care.

This report presents evidence to justify increased funding of investments for the provision of WASH services in Uganda. The focus is on identification and quantification of the opportunity cost or consequences of not taking adequate action or **"Cost of Inaction"** that manifests in form of low outcomes and impacts across the various aspects of the economy and wellbeing of the citizens. It is argued that adequate funding for investments that increase access to WASH services prevents negative outcomes that undermine social-economic transformation that is envisaged in Uganda's Vision 2040, and progress towards Sustainable Development Goal (SDG) 6.

Additional manifestations of poor WASH conditions include limitations on wealth creation, persistent or increased poverty, and low growth. In fact, the Sanitation and Hygiene Fund (SHF) estimated that the market for the Sanitation Economy (SE) in Uganda can reach USD 2.7 billion by 2030, compared to USD 1.724 billion in 2022³. This envisaged Sanitation Economy will easily be lost if adequate funding is not provided. Already, the 2024 Uganda Water Accounts Report⁴ shows an annual decline in all the major water use indicators between 2023 and 2024 (See Annexure 1). Net domestic water use, in million cubic meters, declined from 503,235 in 2023 to 499,030 in 2024. The water used per household per day declined from 46.7 liters to 45.5 liters over the same period.

Evidence on the causal relationships between WASH and broader socioeconomic outcomes underscores the importance of prioritizing WASH as a strategic driver of Uganda's socioeconomic transformation within an integrated development framework. WASH is an integral component of all sectors given its direct and indirect impacts on all aspects that underlie the government's development agenda of ten-fold growth, jobs creation, industrialization, socioeconomic transformation, and transition to middle-income status. As a cross-cutting enabler, WASH contributes to improved health and education outcomes, strengthens climate resilience, advances gender equality, and enhances labour productivity.

¹ Inadequate Investment in Water, Sanitation, and Hygiene (WASH) Services Cost Uganda Nearly Three Percent of GDP – Economic Policy Research Centre (EPRC)

² World Bank (2013) Economic Impacts of Poor Sanitation in Africa: Uganda

³ Investment case: Catalyzing the Sanitation Economy and the Menstrual Hygiene Marketplace in Uganda, May 2023

⁴ UBOS, 2024. <https://www.ubos.org/wp-content/uploads/2025/12/The-2024-Uganda-Water-Accounts-November-2025.pdf>

1.2 Objectives of the Study

The main objective was to estimate the cost of inaction associated with failing to increase investments in adequate WASH services in Uganda.

The study had the following specific objectives:

- 1) Conduct a situation analysis on the status quo of WASH in Uganda.
- 2) Establish the relationship between critical sectors, stakeholders, and WASH to develop advocacy and engagement strategies to increase WASH financing.
- 3) Analyze the interests and power of critical decision makers in planning and budgeting for wealth creation and socioeconomic transformation.
- 4) Estimate the cost of low prioritisation of funding for the WASH sector using selected socio-economic parameters such as health, nutritional status, lives lost, lost earnings, poverty/inequality, education, and overall loss in GDP.
- 5) Recommendation of the best options for identification of required investments and financing for the WASH sector.

1.3 Linking WASH to Socioeconomic Outcomes

Introduction

The conceptual framework explains the pathways through which inadequate investments in Water, Sanitation, and Hygiene (WASH) services generate social and economic losses at both household and national levels. The framework links investments in WASH infrastructure and services to outcomes in health, education, time use, labour productivity, and overall economic performance. Evidence consistently shows that inadequate access to safe water, sanitation, and hygiene services contributes to significant disease burdens, reduced human capital formation, and productivity losses that ultimately constrain economic growth⁵.

In this context, the **cost of no-action** refers to the social and economic losses that arise when WASH investments remain insufficient to meet national needs or to sustain safe service delivery systems.

No-action is not limited to a lack of capital investments; it also includes inadequate financing for operations, maintenance, and service delivery systems that leads to deterioration of infrastructure and declining service quality⁶.

Insufficient investments in WASH services result in limited access to safe water sources, improved sanitation facilities, and adequate hygiene practices. These deficiencies expose communities to contaminated environments and increase the prevalence of water-borne diseases and other health risks. The resulting impacts are transmitted through several pathways that affect households, communities, and the national economy⁷.

The framework identifies four main pathways through which inadequate WASH services generate socio-economic costs: **health impacts, education impacts, time-use impacts, and productivity impacts**. These pathways ultimately influence macroeconomic outcomes such as national income, labour productivity, and economic growth⁸.

1. WASH Service Provision and Access

The first component of the framework relates to the level of investment in WASH infrastructure and services. These investments include water supply systems, sanitation facilities, hygiene infrastructure, behavioral change interventions and the associated operations and maintenance required to ensure sustainable service delivery.

When investment levels are insufficient, households, schools, and health facilities lack reliable access to safe drinking water, improved sanitation, and adequate hygiene services. This often results in unsafe environmental conditions characterized by open defecation, contaminated water sources, , inadequate waste management, and limited access to handwashing facilities. Such conditions increase exposure to disease causing organisms, creating an environment conducive to the spread of infectious diseases⁹.

2. Health Impacts

Poor WASH conditions significantly increase the risk of water-borne and sanitation-related diseases such as diarrhoea, cholera, dysentery, typhoid, and intestinal parasitic infections. Diarrhoeal diseases alone remain one of the leading causes of mortality among children under five years of age in many developing countries¹⁰.

⁵ World Health Organization (WHO). *Global Costs and Benefits of Drinking-Water Supply and Sanitation Interventions*.

⁶ World Bank. *Water and Sanitation Program: Global Costing of Reaching SDG Targets*.

⁷ WHO. *Burden of Disease from Inadequate Water, Sanitation and Hygiene* (2019)

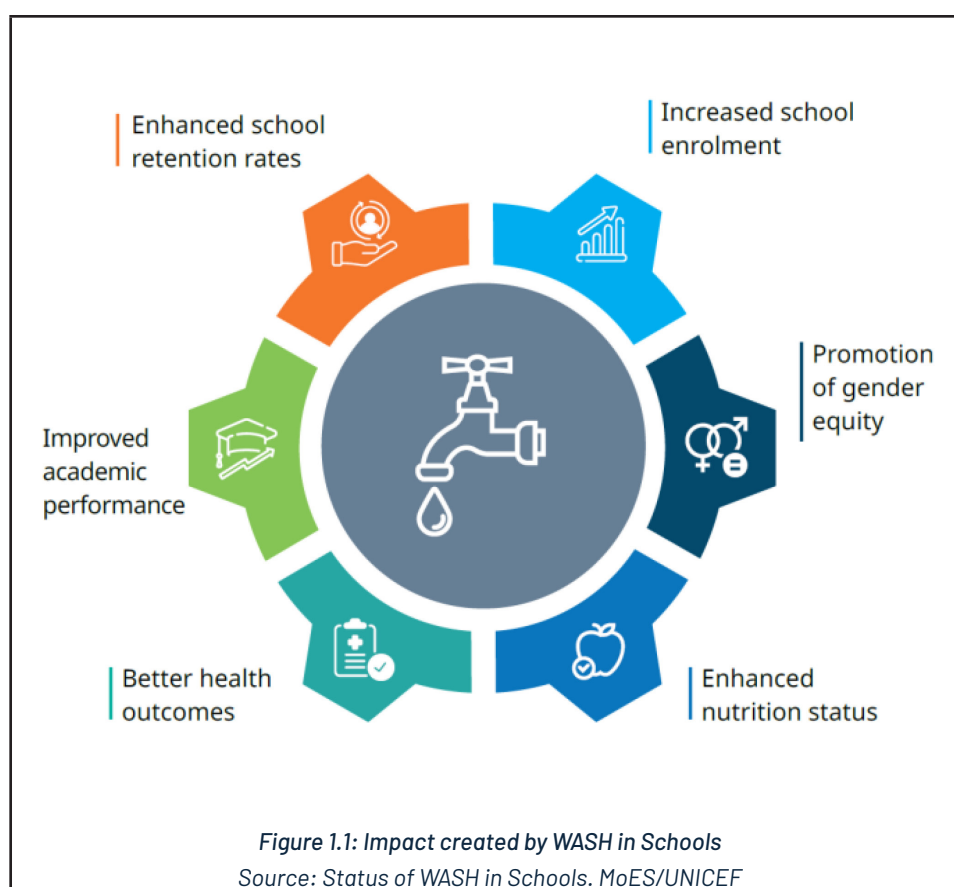
⁸ Hutton, G. & Varughese, M. (2016). *The Costs of Meeting the 2030 Sustainable Development Goal Targets on Drinking Water, Sanitation and Hygiene*

⁹ Prüss-Ustün, A., et al. (2014). *Burden of Disease from Inadequate WASH*

¹⁰ WHO (2017). *Diarrhoeal Disease Fact Sheet*

These diseases impose both **direct and indirect economic costs**. Direct costs include expenditures on healthcare services such as consultations, medication, hospitalization, and transport to health facilities. Indirect costs arise from productivity

losses due to illness, caregiving responsibilities, and premature mortality. In addition, repeated infections contribute to malnutrition and stunting among children, which have long-term implications for physical and cognitive development¹¹.



3. Education Impacts

Inadequate WASH services also affect educational outcomes. Children suffering from WASH-related illnesses are more likely to miss school days while recovering from illness or seeking treatment. Recurrent absenteeism can negatively affect academic performance and long-term educational attainment. School sanitation and hygiene infrastructure also plays a critical role in supporting attendance and participation, particularly for girls. Limited access to safe and private sanitation facilities and menstrual hygiene management infrastructure contributes to absenteeism and increased dropout rates among girls. Over time, these educational disruptions reduce human capital accumulation and limit future economic opportunities¹².

4. Time-Use and Household Welfare Impacts

Another pathway through which inadequate WASH services generate economic costs relates to time use. In many rural and peri-urban areas, households spend considerable time collecting water from distant sources. Women and girls often bear the primary responsibility for water collection, reducing the time available for education, income-generating activities, childcare, and other productive tasks.

Globally, women and girls collectively spend an estimated **200 million hours each day collecting water**, highlighting the substantial opportunity costs associated with inadequate water access¹³. Time spent seeking healthcare for WASH-related illnesses also reduces household productivity and wellbeing.

5. Productivity and Labour Market Impacts

Poor health outcomes and limited educational attainment ultimately affect labour productivity. Workers experiencing frequent illness may suffer

¹¹ Hutton, G. (2013). *Global Costs and Benefits of WASH*.

¹² UNESCO (2014); UNICEF (2020). *Education and School WASH Studies*.

¹³ UNICEF (2016). *Collecting Water is Often a Colossal Waste of Time for Women and Girls*

from absenteeism or reduced efficiency at work. Similarly, children affected by poor health and reduced schooling may enter the labour market with lower levels of skills and productivity.

These effects translate into reduced earnings for individuals and lower productivity for businesses. At the national level, reduced labour productivity weakens the productive capacity of the economy and constrains economic growth¹⁴.

6. Macroeconomic Impacts

When the household-level impacts of inadequate WASH services are aggregated across the population, they translate into macroeconomic losses. These losses include increased national healthcare expenditures, reduced workforce productivity, lower human capital accumulation, and slower economic growth.

Studies estimate that poor sanitation and inadequate WASH services can cost countries **between 1% and 7% of GDP annually**, depending on the level of service access and disease burden¹⁵.

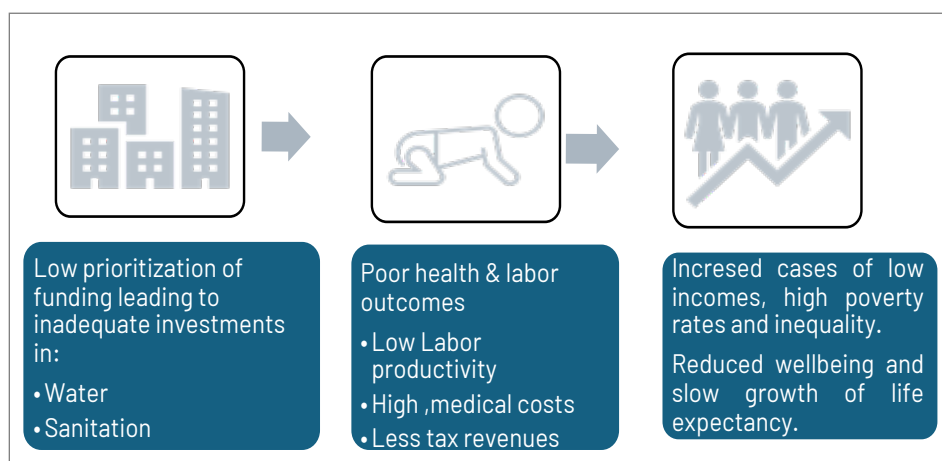


Figure 1: Linkages between WASH and Socioeconomic variables

7. Benefits of Increased WASH Investment

Conversely, increased investments in WASH infrastructure and services generate substantial economic and social benefits. Improved access to safe water and sanitation reduces disease prevalence, lowers healthcare costs, improves school attendance, and enhances labour productivity.

Economic analyses by the World Health Organization (WHO) indicate that every dollar invested in sanitation yields a return of 5.5 US Dollar. While for every dollar invested in water and sanitation, there is a \$4.3 return through improved health outcomes, increased productivity, and reduced healthcare expenditures¹⁶. These benefits highlight the importance of sustained investments in WASH infrastructure and services as part of broader national development strategies.

Conclusion: Defining the Cost of No-Action

The conceptual framework therefore provides the analytical basis for estimating the **cost of no-action**, defined as the economic and social losses that occur when investments in WASH services remain insufficient to meet national needs. These losses occur through multiple interlinked pathways—including health burdens, lost learning opportunities,

time poverty, and reduced productivity—which ultimately translate into slower economic growth and lower national welfare.

Understanding these pathways enables policymakers to quantify the economic consequences of underinvestment in WASH and to make evidence-based decisions on resource allocation and sector prioritization

1.4 Methodology

1.4.1 Methodological Approach

This study estimates the economic and social costs associated with inadequate investment in Water, Sanitation and Hygiene (WASH) services in Uganda. The methodology was designed to identify, quantify, and analyse the cost implications arising from insufficient financing of WASH services and their effects on human wellbeing and economic performance. The analysis tracks the linkages between WASH investments, treated as the key driver (independent variable), and a range of socioeconomic outcomes including health status, educational attainment, labour productivity,

¹⁴ Hutton, G. & Chase, C. (2016). *The Knowledge Base for Achieving SDG Targets on WASH*

¹⁵ World Bank (2019). *Economic Impacts of Poor Sanitation and WASH Services*.

¹⁶ Hutton, G. & Varughese, M. (2016).

and broader economic growth. The assessment considers WASH service provision across multiple levels of society, including households, communities, institutions such as schools and health facilities, and workplaces, particularly in urban centres.

The study adopts a Cost-Benefit Analysis (CBA) framework to compare the economic costs associated with maintaining current levels of WASH financing with the potential benefits that would arise from increased investment in the sector. This approach allows for the systematic evaluation of the cost of inaction, defined as the economic and social losses that occur when investments in WASH services remain insufficient.

The methodology incorporates elements of the cost-of-illness approach to estimate the economic burden of WASH-related diseases and their associated productivity losses.

1.4.2 Conceptual and Analytical Framework

The analytical framework underpinning this study is based on the premise that inadequate WASH services affect the economy through multiple transmission pathways. Limited access to safe water, sanitation and hygiene services increases exposure to communicable diseases, particularly diarrhoeal diseases and acute respiratory infections, which remain among the leading causes of illness and mortality in Uganda.

These health outcomes generate both direct and indirect economic costs. Direct costs arise primarily from expenditures on healthcare services, including treatment of waterborne diseases and related illnesses. Indirect costs arise from lost productivity due to illness, caregiving responsibilities, school absenteeism among children, and reduced human capital development. Evidence presented in the report indicates that improved WASH services significantly reduce disease burden and improve health outcomes, which subsequently enhance labour productivity, educational attainment and economic growth.

The methodology therefore establishes a causal pathway linking WASH investments to broader socioeconomic outcomes. Investments in WASH services influence access to safe water and sanitation, which in turn affect health and education outcomes. Improvements in these intermediate outcomes ultimately translate into broader economic impacts such as higher productivity, reduced poverty, and improved economic performance.

1.4.3 Estimation of Economic Costs

The estimation of the economic costs associated with inadequate WASH services involved several analytical steps. The first step involved identifying the major sources of economic losses linked to poor WASH access. These include WASH-related diseases such as diarrhoea, cholera, dysentery, hepatitis A and typhoid, as well as socioeconomic impacts associated with lost productivity, school absenteeism, and time spent collecting water.

The disease burden associated with inadequate WASH services was estimated using available national statistics and epidemiological evidence. Data on disease prevalence and treatment patterns were used to determine the number of individuals affected by WASH-related illnesses. For example, diarrhoeal diseases remain a leading cause of illness and mortality among children under five years, while acute respiratory infections affect a large proportion of children seeking treatment at health facilities.

To estimate the direct economic costs of disease, the analysis derived unit treatment costs for each of the major WASH-related diseases. Due to limited availability of country-specific cost data, these estimates were derived from a review of national and international academic literature. In estimating these costs, the analysis accounted for differences in treatment costs between outpatient and inpatient cases, reflecting variations in disease severity and treatment requirements.

In addition to treatment costs, the methodology also estimated indirect economic costs arising from lost productivity and time. Illness associated with poor WASH services results in lost workdays among adults and lost school days among children. These productivity losses reduce household incomes and limit participation in economic activities. Furthermore, time spent collecting water or accessing sanitation facilities represents an opportunity cost that reduces time available for productive work, education, or household activities.

1.4.4 Data Sources

The analysis draws on a combination of primary and secondary data sources to estimate the costs associated with inadequate WASH services. National and sub-national statistics were obtained from the Uganda Bureau of Statistics and the Ministry of Health. These data sources provided information on population characteristics, disease incidence, and healthcare utilization patterns.

Additional information was obtained from academic studies, sector reports, and publications from international organizations such as the World Health Organization and UNICEF. These sources provided estimates of disease burdens, treatment costs, and socioeconomic impacts associated with inadequate WASH services. The integration of these data sources enabled the estimation of both the direct and indirect costs associated with poor WASH access in Uganda.

1.4.5 Projection of Costs and Benefits

The methodology also considers the potential benefits associated with increased investments in WASH services. These benefits include reductions in disease burden, lower healthcare expenditures, improved educational outcomes, and increased labour productivity. Improvements in these areas contribute to broader economic gains, including higher economic growth and improved wellbeing.

To illustrate these potential outcomes, projections were made to assess how increased financing for WASH services could reduce the economic costs currently associated with inadequate service provision. These projections provide an indication of the potential socioeconomic benefits that could be achieved through greater investment in the WASH sector.

1.4.6 Limitations of the Methodology

While the methodology provides a structured approach to estimating the cost of inaction, several limitations should be acknowledged. In some cases, limited availability of country-specific cost data required the use of estimates derived from international literature. In addition, the analysis focuses primarily on quantifiable economic impacts and may not fully capture broader social and environmental consequences associated with inadequate WASH services.

Despite these limitations, the methodology provides a credible framework for assessing the economic implications of insufficient investment in WASH services and supports evidence-based policy decisions aimed at strengthening the sector.

1.5 Structure of the Report

This report is organized into several sections that collectively present the analytical framework, empirical evidence, and policy implications of inadequate investment in Water, Sanitation and Hygiene (WASH) services in Uganda.

The **first section** introduces the study by outlining the background, policy context, and rationale for estimating the cost of inaction in WASH financing. It highlights the importance of WASH services for public health, human capital development, and economic transformation, and presents the objectives and scope of the study.

The **second section** presents the conceptual framework that explains the pathways through which WASH investments influence social and economic outcomes. This section discusses the interrelationships between WASH services, disease burden, education outcomes, labour productivity, and broader economic performance. The framework provides the analytical foundation for estimating the economic costs associated with inadequate WASH investments.

The **third section** outlines the methodology used in the study. It describes the analytical approach adopted to estimate the cost of inaction, including the cost-of-illness framework and the economic valuation methods applied to quantify both direct and indirect costs. The section also explains the data sources used, the estimation procedures for disease burden and economic losses, and the assumptions underlying the projections and sensitivity analysis.

The **fourth section** presents the empirical results of the analysis. It estimates the economic burden associated with inadequate WASH services across multiple cost categories, including premature mortality, healthcare expenditures, productivity losses, time costs related to water collection, education-related impacts, and broader multi-sector economic losses. The section also examines the distribution of these costs across population groups and sectors.

The **fifth section** provides projections of the economic implications of continued under investment in WASH services over the medium term. It compares the costs associated with maintaining current financing levels with the potential benefits that could be realized through increased investments in the sector.

The **final section** discusses the policy implications of the findings and presents recommendations for strengthening WASH financing and service delivery in Uganda. These recommendations focus on priority investment areas, financing strategies, and institutional measures that could help reduce the economic costs associated with inadequate WASH services and support sustainable development outcomes.

SECTION 2.0:

POLITICAL, GOVERNANCE AND INSTITUTIONAL CONTEXT

The WASH sector in Uganda operates within a well-established political, governance, and institutional framework aligned with the Government's Programme-Based Planning and Budgeting approach. The sector benefits from both political leadership and technical coordination across government institutions.

Implementation of WASH services follows a coordinated multi-stakeholder approach involving the Government of Uganda (GoU), Development Partners (DPs), non-governmental organizations (NGOs), Civil Society Organizations (CSOs), academia, and communities.

2.1 The Policy and Legal Framework

The policy goals and strategic framework for WASH in Uganda are anchored on both the global and local goals and objectives. At the local level, the overall goal of the country is expressed in the Vision 2040, the NDPs and Ministerial Policy Statements. At the global level, the country has aligned its goals to the frameworks of the Sustainable Development Goals (SDGs) as well as the Agenda 2063 of the African Union. The high-level WASH policies are established by the core ministries (mainly MWE, MoH, MoES MoLG and MGLSD). These operate under the Human Capital Development Programme of the NDP IV. The Lower Local Governments (LLGs) and communities often establish By-laws mainly for effective enforcement of the practices at community and household levels.

2.2 The Institutional Frameworks

Sector Ministries and Coordination Mechanisms

The core Ministries, Departments and Agencies (MDAs) responsible for planning, financing, and delivering Water, Sanitation and Hygiene (WASH) services in Uganda include the Ministry of Water and Environment, Ministry of Health, Ministry of Education and Sports, Ministry of Finance, Planning and Economic Development, and Ministry of Local Government. These ministries jointly oversee sector planning, policy implementation, financing, and monitoring of WASH service delivery across the Country. Coordination of sector priorities and financing is undertaken through regular Programme reviews, which provide a platform for consolidating sector investments and assessing performance. These reviews inform the allocation of conditional grants to local governments, which are distributed based on criteria such as population served, geographical coverage, equity considerations, and

variations in capital and operational costs required for service delivery.

Political and Strategic Leadership

Within Parliament, oversight of the WASH sector is primarily undertaken by the **Parliamentary Committee on Environment and Natural Resources**, which reviews sector policies, budgets, and the performance of relevant Ministries, Departments and Agencies (MDAs), particularly the Ministry of Water and Environment.

The **Office of the Prime Minister (OPM)** provides overall coordination of government programmes and facilitates collaboration among MDAs, development partners, and civil society actors. The Office also coordinates special interventions such as emergency responses in refugee-hosting areas and oversees cross-sector initiatives, including environmental and climate-related programmes.

The **Uganda Parliamentary Forum on WASH (UPF-WASH)** serves as an advocacy platform bringing together Members of Parliament committed to strengthening WASH policies, legislation, planning, budgeting, and oversight across the country. The Forum works closely with sector ministries, development partners, and civil society organizations to promote sustained political commitment to the WASH agenda.

Semi-Autonomous Agencies Supporting WASH

Several semi-autonomous agencies support implementation of WASH-related programmes:

1. **National Water and Sewerage Corporation (NWSC):** National Water and Sewerage Corporation is a government-owned utility responsible for providing water supply and sewerage services in cities, municipalities, towns, and selected town councils.
2. **National Environment Management Authority (NEMA):** National Environment Management Authority coordinates environmental management in Uganda and oversees development and enforcement of environmental policies, regulations, and standards.
3. **Uganda National Meteorological Authority (UNMA):** Uganda National Meteorological Authority provides weather and climate services and serves as the national focal

point for the Intergovernmental Panel on Climate Change (IPCC).

4. **National Forestry Authority (NFA):** National Forestry Authority manages Central Forest Reserves and supports sustainable forest resource management, which is important for watershed protection and water security.

Regional Institutional Support Structures (MWE)

In line with the decentralization policy, there are regional institutional structures, mainly under MWE, that provide technical support to districts. These include:

- 1) **The Rural Water Supply and Sanitation Regional Centres (RWSRCs)** provide technical support and coordination for rural WASH programs. They assist districts in planning, monitoring, and supervising water and sanitation interventions while strengthening the capacity of local government technical staff.
- 2) **The Water Supply and Development Facilities (WSDFs)** support the development of water supply infrastructure in small towns and rural growth centres. Their functions include scheme identification and planning, supervision of feasibility and design studies, procurement and management of construction contracts, and capacity building for local water and sanitation boards.
- 3) **The Umbrella Authorities (UA)** manage and support the operation and maintenance of piped water supply systems in small towns and rural

growth centres. They operate across regional clusters in Central, Southwestern, Midwestern, Eastern, Karamoja and Northern Uganda.

- 4) **The Water Management Zones** coordinate the integrated management of water resources across major catchments, including Upper Nile (Lira), Kyoga (Mbale), Albert (Fort Portal), and Victoria (Mbarara). They support the implementation of Integrated Water Resources Management (IWRM).

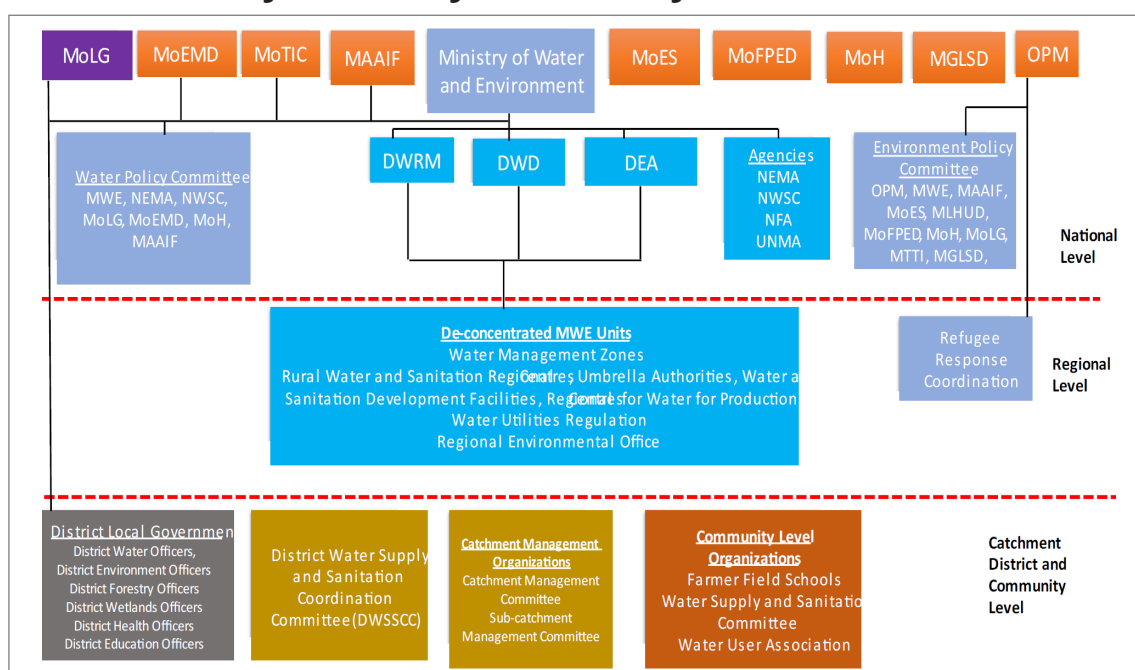
- 5) **Regional Regulation Units** support the Water Utility Regulation Department in regulating water utilities. Their roles include gazetting towns and service areas, monitoring utility performance, supporting tariff processes, and facilitating stakeholder engagement.

Regional Institutional Support Structures (MOH)

Within the health sector, the Government of Uganda has 7,140 public and private healthcare facilities comprised of National Hospitals, Regional Referral Hospitals, General Hospitals and Lower-Level facilities (HC IV, III and II). These offer care with critical WASH services delivery needs and requirements. The technical oversight and coordination of such services is undertaken at regional and district level with guidance of the Environmental Health workers.

Figure 2.1 illustrates the linkages among these actors from national to community levels.¹⁷

Figure 2.1: Linkages between the government actors.



¹⁷ Interface Consulting (2021). National Level WASH Systems Assessment in Uganda. Commissioned by the WASH Alliance for Change (Water For People - Uganda, IRC Uganda, Wateraid Uganda) in partnership with MWE.

Non-State Stakeholders

Non-state actors play an important role in supporting WASH service delivery. These include development partners, NGOs, CSOs, academia, and communities.

NGOs and CSOs operate at national and local levels, supporting needs identification, planning, budgeting, and implementation of WASH initiatives. They also provide technical expertise, mobilize resources, and promote best practices for sustainable service delivery.

To strengthen coordination among civil society actors, NGOs and CSOs formed the Uganda Water and Sanitation Network (**UWASNET**). The network works closely with government institutions to promote alignment with national strategies and is funded by its members, Development Partners, and the Ministry of Water and Environment.

Communities, together with cultural and religious institutions, play a key role in implementing WASH programmes at the local level, particularly in promoting behavioral change and ensuring sustainability of services.

Section 2.3: Mapping of key strategic partners supporting the sector

The process of delivering WASH services involves stakeholders with competing interests and associated influences that require continuous engagement through advocacy if one is to realize the desired outcomes. The section presents a mapping of stakeholders based on their interests and power to influence or make decisions. The mapping/ranking was achieved through a Focus Group Discussion (FGD) comprised of a team of experts from government, NGOs, and the academia who have deep insights and knowledge of the WASH sector¹⁸. The ranking was conducted on both institutions and individuals (political and technical heads such as Speaker and Deputy Speaker of Parliament, Ministers, Permanent Secretaries, Executive Directors). The assessment of individuals was necessitated by the fact that the hierarchical nature of organizations/institutions has a significant power to influence decision-making within the institutions. Quite often decisions are based on a few individuals within or even from outside the organization in the case of "orders from above" that is commonly used to imply decisions made by powerful interested parties outside the organization. The results of the ranking are indicated in Text Box 2.1 below.

Text Box 2.1: Bi-polar mapping and rating of stakeholders' interest and power¹⁹

Degree of Power	Quadrant A (Keep Satisfied) High Power Low Interest	Quadrant B (Manage Closely) High Power High Interest
	Office of the President; Parliament; PPS; OPM; PM; MoFPED (Minister & PSST); Cabinet; NRM-SEC; CDF; OWC; Manufacturers; Contractors in WASH; FIs; NEMA and the Academia.=	President; Office of the First Lady & Min for MoES; Speaker & Dep Speaker; Head of Civil Service; Secretary Office of the President; PS (MoES, MWE & MoH); NWSC; and DPs;
	Quadrant C (Monitor) Low Power Low Interest	Quadrant D (Keep Informed) High interest Low Power
	Prime Minister; Leader of Opposition; NRM Chief Whip; Clerk to Parliament; MWE (Minister); Service Delivery Unit (OPM), MoDVA (Minister, PS); NMS; MoW&T (Minister & PS); MAAIF (Minister & PS; MoLG (Minister and PS), LGFC; MoGL&SD (Ministry, Minister & PS); MoLA (Minister & PS); UBA; KACITA, PSFU & UMA and Media.	WASH-Parliamentary Forum; MoH (Planning, HMIS; National & RRs; PS/MoDVA, KCCA (Minister, Lord Mayor, ED); MoLG; LGs; ULGA, UAAU; MTIC (Minister & PS); MoLA (Police & Prisons); Cultural & Religious institutions; NPA; Private sector (sewage management operators; Education institutions; NGOs/CSOs; Communities and households.
	Degree of Power	

Source: Focus Group Discussion by team of experts

¹⁸ The team included Commissioner from the MoH, Executive Directors of the key NGOs/CSOs, academia and other practitioners in the sector.

¹⁹ The layout and noting of entities within each Quadrant, has nothing to do with their power or degree of interest with the groups.

The key highlights from the ranking and mapping exercise include the following:

- i. Critical stakeholders with power and who are large consumers of WASH services, such as the Ministry of Defence and Veteran Affairs (MoDVA) have not been adequately engaged. The MoDVA, apart from being a large consumer, given the number of active and retired security personnel, is involved in the construction of projects in military establishments, schools and HCFs that require significant resources for WASH.
- ii. The advocacy strategy for initiatives such as the Health National Adaptation Plan (H-NAP) should increase the scope of stakeholders to be engaged. This should include deepening

interest of certain powerful actors, such as the Ministry of Finance, Planning and Economic Development (MoFPED), who might be restricted by directives given the competing demands.

- iii. Certain institutional stakeholders such as Parliament have membership that changes after a given duration, hence requiring continuous engagement. The current 12th Parliament has close to 60% new members.
- iv. The dissemination of the evidence from this report should target all stakeholders at National and sub-national levels as it presents a new approach to common/traditional advocacy messages and practices in data collection, monitoring and evaluation.

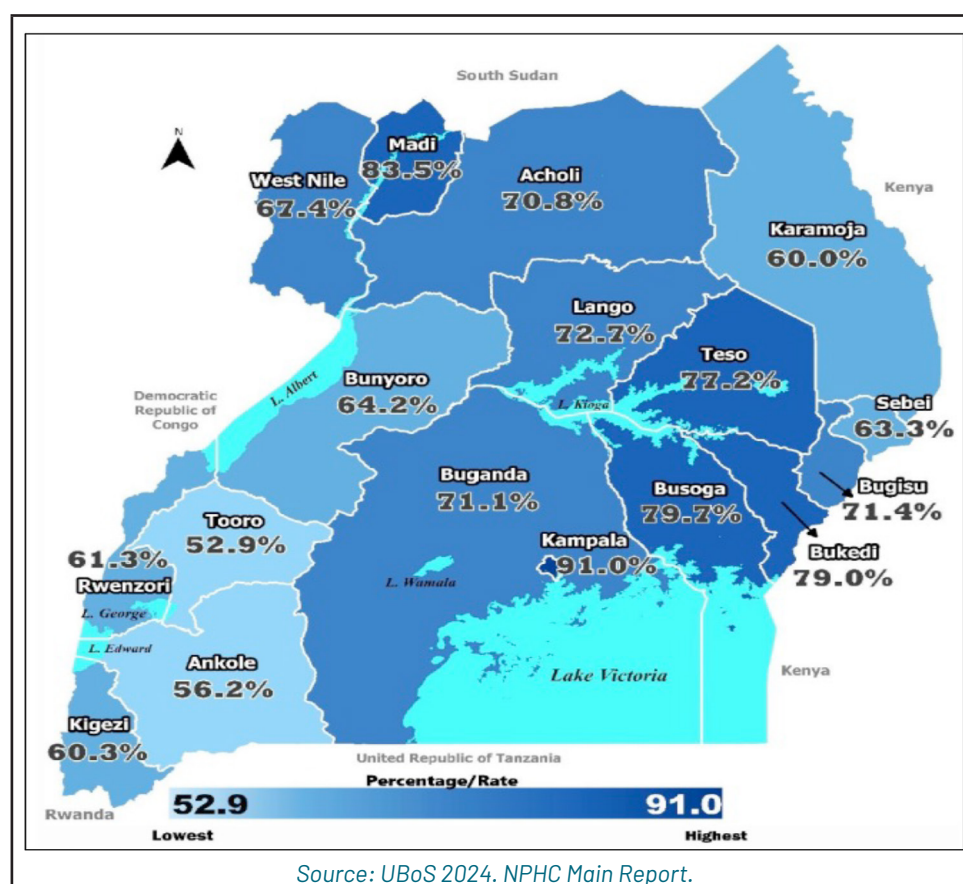
SECTION 3.0: THE STATUS OF WASH IN UGANDA

The status of WASH in the country was assessed using high level indicators at both the national level and the different regions and sectors. The review was partly based on indicators of WASH in communities, institutions (mainly schools and HCFs) and places of work/business in urban areas. It provided a context for the deeper and broader review of impacts of WASH on the population and the

economy from the perspective of key aspects such as mortality and morbidity, attendance of schools and learning outcomes, time lost from work and labor productivity.

3.1 WASH at National and Community Levels

Map 3.1: Proportion of households within 1 km of an improved water drinking source



The information and status of WASH at national level is based on various sources including UBoS (2024).²⁰ For example, improved water sources include piped water, protected springs, bottled water, deep wells, while the unimproved water sources include unprotected wells/springs, vendors, tankers/trucks, rainwater, and river/lake. Basic sanitation is an improved toilet facility that is not shared with other households while limited sanitation implies sharing facilities. The improved toilet facilities include flush toilets, VIP toilets, pit latrines covered with a slab, and Ecosan.

At the regional level, at least 61.6%, 16.1% and 13.9% of households in Karamoja, Acholi and Lango sub-regions respectively, have no toilets (UBoS, 2021).²¹ In Karamoja, at least 18.7% of households mentioned cultural practices as one of the causes of lack of latrines, besides other factors such as high cost of construction at 28.7% and lack of awareness or ignorance at 26.1%.

Uganda has a safe water coverage of 67% in rural areas and 72.8% in urban areas with 80% of the villages in rural areas and 82% of the villages in urban

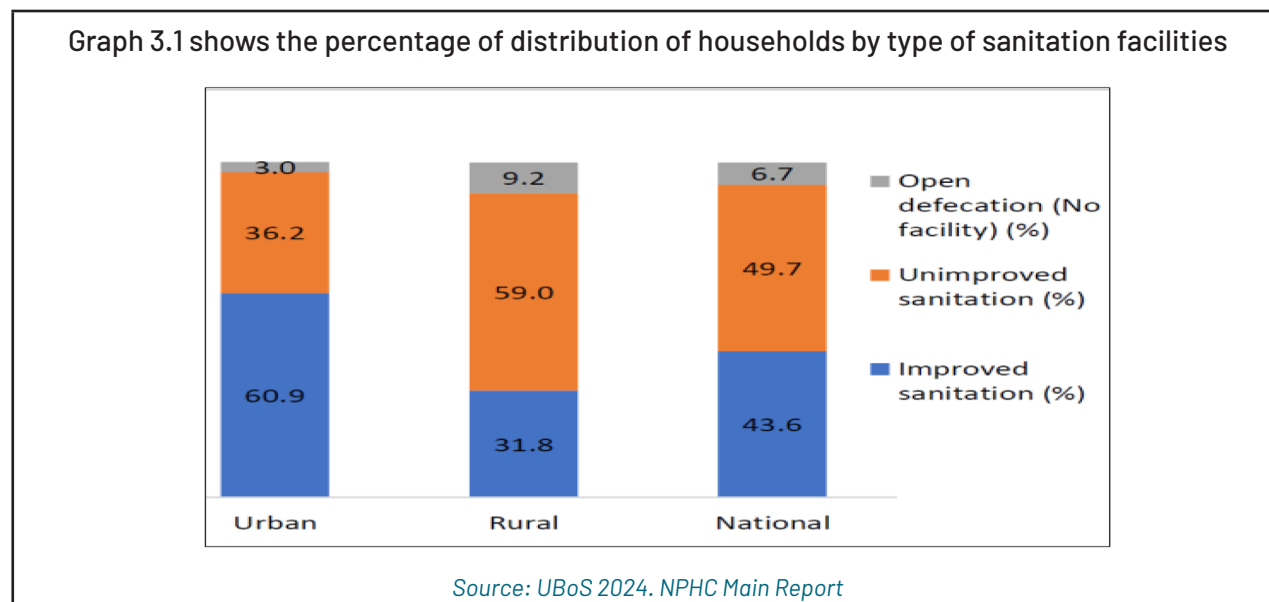
²⁰ The National Population and Housing Census (NPHC) Main Report

²¹ The 2024 census showed that six in every ten (60.2%) households with children in Karamoja, 14.6% in Teso, were practicing open defecation.

areas having at least one (1) safe water source²². According to the same report, 26.9% of Ugandans have access to improved sanitation that is not shared (basic sanitation) in rural while urban access

was at 47.8%. According to UBoS 2024 NPHC Main Report, 3% of the urban population and 9% of the rural population still practice open defecation.

Graph 3.1 shows the percentage of distribution of households by type of sanitation facilities



Graph 3.1 shows the percentage of distribution of households by type of facilities. Almost 10% of households in rural areas had no sanitation facility and were engaged in open defecation, which increases the spread of pathogen-related illnesses. The findings show that the national level indicators for sanitation were below the target for the NDP III of 85% coverage in rural areas and 100% in urban areas by 2025.²³

Urban and Peri-urban areas continue to face challenges of disparities in access to WASH services, especially in informal settlements. Rapid urbanization has strained existing infrastructure and exposed service gaps as the number of facilities has not kept pace with rapid population growth.

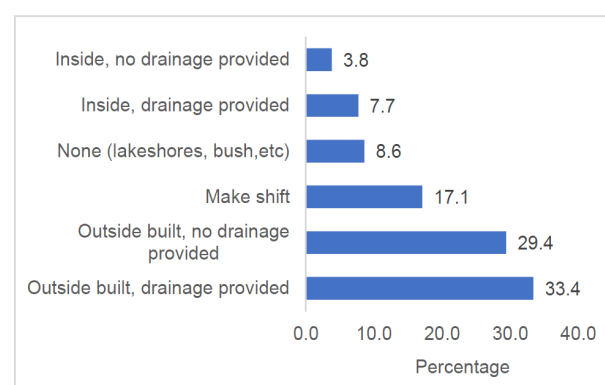
Water for People and Kampala Capital City Authority-KCCA (2015)³⁰ showed that only 43% of the sewerage in Kampala was either effectively safely treated or safely abandoned at on-site facilities. The rest of the sewerage was: unsafely emptied or abandoned (50%), not effectively treated (4%), lost to leakage during transportation (2%), and disposed through open defecation (1%).

UBoS (2024) showed that bathrooms with drainage built outside were at 40.8% for urban areas and 28.4% for rural areas (See Graph 3.2). Teso region had the highest proportion of households using makeshift bathrooms (26.7%) and Karamoja had the

highest number of households with no bathroom (43.7%).

Graph 3.2: Percentage Distribution of Household Bathrooms by Type

Figure 11.6: Percentage Distribution of Households by type of Bathroom



Source: UBoS, 2024, NPHC, Main Report

3.2 Effects of Culture on WASH at Community level

Cultural beliefs, practices and livelihood activities have a major influence on the availability, access and use of WASH services mostly at household and community levels. Socioeconomic aspects such as gender discrimination, and inequalities in incomes and domestic power relations tend to influence

²² <https://mwe.go.ug/publications/reports/performance>

²³ National Planning Authority, 2020. National Development Plan III.

access to adequate hygiene facilities. The low-income people, who in the first case fail to access good WASH facilities, experience a relatively bigger economic burden from the negative effects of poor sanitation. Poor people in Uganda, particularly in urban informal settlements, spend up to 22% of their income to access water from vendors. They face high costs for water approximately UGX 100–200 (\$0.01–0.02) per unit and incur significant expenses for sanitation, including boiling water using purchased fuel, disproportionately impacting the poorest households²⁴

Communities can resist adoption of better sanitation practices due to adherence to existing cultural norms and practices. Cultural changes are often slow as communities resist what they perceive to be influences of external people (MoH, 2017).²⁵ Practices like open defecation can be linked to socio-cultural

practices or working far away from home as in the case of nomadic pastoralism. According to Ntaro et al (2022) agricultural households with fields located far from their homes do not establish sanitation facilities near the gardens.

3.3 WASH in Schools

Access to WASH services in training institutions is central to realization and sustainability of the national development goals and objectives as it has a significant effect on outcomes of the sector especially among girls (MWE, 2020). More than 15 million people in learning institutions require WASH services almost every day of the year. These include more than 14.7 million learners and close to 300,000 teachers, excluding non-teaching staff, which is (See Table 3.1).

Table 3.1: Number of Institutions, Learners and Teachers in 2024/25

Education Level	Institutions	Learners	Teachers
Pre-Primary	7,408	592,040	18,790
Primary	26,597	11,787,396	226,771
Secondary	4,571	2,044,586	46,975
Technical (Certificate)	135	22,977	-
Technical (Diploma)	174	61,697	-
Technical (Higher/Degree)	73	227,127	-
Total	38,958	14,735,823	292,536

Source: MoES, 2025. *The Education Statistics Abstract (Provisional Report)*

The MoES (2025) shows that primary schools alone have about 205,000 latrines representing a ratio of 57 pupils per stance, with a better record of 29 pupils per stance for pre-primary. The pupil-to-toilet stance ratio of 71:1 falls short of the recommended national standard of 40:1 (MoES, 2023). The MoES (2020) indicated that, although 58% and 73% of the primary and secondary schools, respectively, had access to water, there were no hand-washing facilities in at least 44% and 33% of the two respective categories of institutions. About 42% and 27% of primary and secondary schools did not have access to safe water (UNICEF, 2018). More so, the functionality of water sources in schools was limited by inadequate maintenance as 30% of them had no water despite the presence of an improved source²⁶.

Inadequate MHM facilities affect the dignity, attendance, health, and other social and psychological aspects of girls. The challenge of Menstrual Hygiene Management (MHM) in Uganda is

reflected in the Integrated Sanitation and Hygiene Financing Strategy (2018–2030).

The strategy showed that the national standard for MHM, which requires a separate toilet facility for girls, an incinerator, and handwashing facilities, is only in about 21% of the schools. Only 29% of the schools in the Soroti region had spaces for changing menstrual materials, and cleanliness was not good with more than 60% of school latrines reported to be dirty and poorly maintained (Hennegan et al., 2019). The mainstreaming of MHM, that was proposed in the Gender in Education Sector Policy and National Strategy for Girls Education, has been weak due to inadequate knowledge and facilitation.

3.4 WASH in Health Care Facilities

The MoH (2022) assessment across 4,272 HealthCare Facilities; Government and Private Not for Profit (PNFPs) from 136 districts reported that 76.6% of HCFs lacked efficient Healthcare Waste Management (HCWM) systems. A representation of

²⁴ <https://pmc.ncbi.nlm.nih.gov/articles/PMC10298274/>

²⁵ MoH (2017) National Sanitation and Hygiene Guidelines.

²⁶ WHO/UNICEF JMP for WASH (2024) Progress on drinking water, sanitation, and hygiene in Schools 2015–2023: Special focus on menstrual health

other WASH parameters are presented in the table below; (see Table 3.2).

Table 3.2: Access to WASH Services by Government and PNFP Health Care Facilities

WASH Parameter	Level of Access (%)			
	No service	Limited	Basic	Advanced
Safe water	17	22	60	01
Sanitation	10	81	5	4
Hygiene (Hand Washing facilities)	11	21	46	21
Environmental Cleanliness	31	40	08	21

Source: MoH (2022). National Micro Planning Handbook for WASH in HCFs in Uganda

Relatedly, a WHO 2020/2021 report on WASH in Health Care Facilities (HCF) in Uganda indicates significant service gaps: only **10.7%** had basic sanitation services, **60.0%** had basic hand hygiene services, and **22.7%** had basic environmental cleaning. While 96% had an improved water source, only 24% of toilets had soap and water²⁷. This corresponds with a Water Aid report of 2019 conducted in the Greater Kampala Metropolitan Area (GKMA) that indicated 48% of the HCFs did not have access to a reliable and safe water supply.²⁸ Access to improved and usable sanitation was in 75% of the HCFs while hand washing hygiene services were in 76% and 68% of the HCFs in rural and urban areas respectively. Basic waste management services were only available in 48% of the HCFs. Although a significant portion of waste (78%) was segregated, its treatment was only available in 48% of the HCFs.

Although estimates showed that the amount of waste treatment in Uganda had increased 30-fold between 2003 and 2015, waste management in Kampala remained a challenge with only about 50% of the daily garbage collected. According to Lwasa & Owens (2018), only a portion of the fecal sludge was being managed to a satisfactory level with over half of the sewerage being unsafely managed. The high cost of emptying pit latrines and lack of access routes for trucks remains a significant burden for many low-income families that live in poorly planned facilities. More so, several pit latrines were illegally built along drainage channels, causing fecal matter to be washed into the unprotected wells during heavy rainfall (Dickson-Gomez et al., 2023).

3.5 WASH in Work or Business Areas

The conditions of WASH in the work-related and business places have an effect on the functionality of key economic sectors including trade, tourism, security, and public administration. The lack of funding for additional sanitation infrastructure and its maintenance has exacerbated the problem in congested areas such as markets. The KCCA revealed that eight major markets lacked access to safely managed WASH facilities²⁹.

²⁷ https://www.researchgate.net/publication/388075134_Infection_prevention_and_control_and_water_sanitation_and_hygiene_status_of_healthcare_facilities_in_the_Greater_Kampala_Metropolitan_region_during_the_COVID-19_pandemic_in_Uganda

²⁸ JMP, WASH in Health facilities, Retrieved on March 2023

²⁹ KCCA, 2019., Survey of the following markets: Katwe, Mengo, Nakulabye, Makerere Kivulu, Bwaise 1, Bwaise 2 (Ddembe), Mulago, and Munaku.

SECTION 4.0:

COST OF NO-ACTION TO INCREASING WASH FINANCING

The section presents estimates of the implications of the cost of taking 'No-action' to increase funding and investments in the WASH sector. The costs are estimated at the micro and macro levels. The micro level is focused on the impacts associated with selected individual diseases while the macro level considers the implications on the entire economy. The socio and economic impacts highlighted in the literature include lives and incomes lost as well as costs of treatment. The implications often manifest through channels that include poor health due to water-borne diseases; poor education outcomes related to high absenteeism and dropout; loss of production time and income due to lost working days and low labor productivity; and increased costs of treatment.

4.1 Background to the Estimation Process

The section presents background information and processes of computing the socio and economic costs of no-action to increased funding for the provision of WASH services. It provides the figures and interrelations that underlie the computations of impacts of inadequate provision of WASH services. These include the sizes of the populations affected by diseases and costs of treatment as well as non-treatment. The section also shows the derivation of key methodological parameters such as unit costs and populations affected by selected diseases or other incidences of limited provision of WASH services.

4.1.1 Underlying linkages through health factors

Health factors are broadly reflected through Public Health aspects such as environmental health with 60% of the preventable disease burden linked to poor sanitation and hygiene³⁰. For example, in FY2024/2025, the total approved budget of MoH was 1,343.9 billion, of which 2,744 billion was allocated to environmental health equivalent to 0.2% of the total budget. Environmental Health has been constrained by limited public resources with over 90% of the funds for sanitation provided by

Development Partners and are mostly invested in big infrastructure³¹. This budget limitation translates into human resource constraints for environmental health implementation, enforcement, promotion, and advocacy. More so, there is limited political support for environmental health and sanitation (MoH, 2005)³².

As a result, the country continues to grapple with poor sanitation and hygiene with only 43.6% of households having access to improved sanitation facilities.³³ Infections related to poor hygiene, and inadequate safe and clean water kills 2.7% of the babies within four weeks (28 days) of birth.³⁴ Diarrheal, which is a leading cause of death and illness, especially among children under five, kills 33 children every day³⁵ and over 4,500 children under 5 years are estimated to die each year from diarrheal diseases. Relatedly, UBoS (2023) reported that acute respiratory infections affect about 67% of the children under five who sought treatment from HCFs. Health facility-acquired infections (HAIs) in Uganda represent a significant burden, with an estimated 422,000 cases and 43,600 excess deaths annually as of 2022, costing the economy roughly US\$ 580 million or 1.43% of GDP³⁶.

Access to WASH services is critical for life-saving practices at birth including the washing of hands by skilled and unskilled birth attendants, cleaning birth surfaces, maternal perineum, as well as the umbilical cord for the newborn (Gon et al., 2016). Inadequate WASH services expose newborns and their mothers to unhygienic condition and infections that lead to poor health outcomes such as low birth weight and miscarriages, or even death of both mother and baby. Kayom et al. (2018) indicated a relationship between washing of hands with soap and reduction of the likelihood of sepsis among babies in the urban areas of Uganda, while UNICEF (2019) reported that infections got at birth due to lack of safe water contributed to high maternal death rate.³⁷ In fact, Mugambe et al. (2021) noted that some women get discouraged from delivering in the health facilities due to lack of adequate WASH services.

³⁰ <https://www.shfund.org/uganda>

³¹ <https://www.shfund.org/uganda>

³² MoH, 2005. National Environmental Health Policy, environmental Health Division. Kampala

³³ UBOS, 2024. National Population and Housing Census

³⁴ <https://www.unicef.org/uganda/access-clean-water-healthy-newborn-babies>

³⁵ <https://centreforafricanjustice.org/world-toilet-day-and-lack-of-wash-in-uganda-schools/#>

³⁶ <https://washmatters.wateraid.org/sites/g/files/jkxooof256/files/2024-04/Costs-healthcare-acquired-infections-Uganda.pdf>

³⁷ <https://africanwomeninmedia.com/2023/05/13/water-safety-affects-the-lives-of-women-and-girls-in-uganda/>

Interventions such as sterilization of equipment and solar powered water pump for the maternity ward significantly improved hygiene and reduced neonatal sepsis in selected HCFs in Amuru district (Mukasa et al., 2023). Neonatal sepsis is linked to unhygienic handling of newborns at birth, contributes 31% of deaths that happen within four weeks of birth while other children get stunted. Studies indicate that close to 24.4% of the children under 5 years in Uganda are stunted, partly due inadequate WASH services³⁸. Poor sanitation also contributes to the spread of other diseases such as schistosomiasis, malaria, trachoma and soil-transmitted helminth infections. For example, Mulindwa et al (2022) indicated that poor sanitation contributes to high rates of schistosomiasis among the shoreline communities of Lakes Albert, Victoria and Kyoga, and the Albert Nile.

4.1.2 Underlying linkages through education factors

The social impacts of inadequate WASH services in education manifest in the form of high absenteeism, especially among girls who face challenges of accessing safe, hygienic and private sanitation facilities. Students are reported to miss school for close to 5-7 days as they recover from diarrhea³⁹. In Uganda, adolescent girls facing Menstrual Hygiene Management (MHM) challenges frequently miss 2 to 5 school days per month. This translates to approximately 12 to 15 days (about 2 weeks) per school term and can result in losing 12 to 48 school days per year, significantly affecting academic performance⁴⁰. In addition, an estimated 10% of girls drop out due to illnesses related to poor WASH, negatively affecting children's overall academic progress by impacting their ability to focus and learn effectively.

Girls and women are disproportionately affected by inadequate sanitation facilities since they often bear more of the burden of collecting water, which also introduces aspects of safety risks as they travel long distances to collect water.⁴¹

4.2 Micro Analysis of Cost Implications of Key Diseases

This section presents estimation of costs of treating the most prominent waterborne diseases that include cholera, diarrhea, dysentery, hepatitis A, and typhoid. The costs of treatment would translate into benefits in form of savings in the event of effective prevention through adequate investments in WASH.

Additional benefits are linked to the contribution of the healthy (non-sick) person through participation in the day-to-day social economic activities.

The process of computing costs and benefits involved the following four stages:

- 1) Derivation of unit costs associated with treatment of one person for each of the respective diseases was derived from reviews of local and global academic literature sourced online. The literature included both published and unpublished studies that had credible and had been cited in other studies. This was in response to the limited information on the unit costs and economic burden associated with the different diseases among childhood and across all ages in Uganda. To finalize the actual costs, consideration was made for variations in costs of treatment for out-patients that are lower than costs of treating the in-patients. Similarly, a higher number of out-patients was adopted based on studies on both Uganda and countries with similar conditions. The details are provided in Annexure A.
- 2) Identification of the data reported in the MoH/HMIS national database on cases for each of the diseases for the period of 2020 to 2024. Based on experiences from related countries and Uganda, it was assumed that 30% of the patients were not captured in the national database as they may have sought treatment from private facilities that do not report to mainstream system.
- 3) Derivation of the total cost of treating patients who suffered from each of the diseases was computed by multiplying the unit costs (from No.1) with the number of patients (in No. 2). As indicated in No. 2 above, the total cost provided for an additional 30% of the patients who did not reflect in the national data.
- 4) The final aspect was the estimation of future benefits arising from making adequate investments in WASH that would reduce the disease incidences and associated costs of treatment. The study adopted the year 2025 as the baseline to inform future projections that were based on trends derived from 2020 to 2024. The projections beyond 2025 were based on the official population growth rate of 2.9%, reported in the last NPHC for the last 10 years between 2014 and 2024 (UBoS, 2024).

³⁸ <https://www.unicef.org/uganda/access-clean-water-healthy-newborn-babies>

³⁹ <https://www.nilepost.co.ug/index.php/health/216846/the-impact-of-poor-school-sanitation-increased-health-risks-and-academic-disruption>

⁴⁰ <https://www.cehurd.org/eight-years-since-the-government-committed-to-providing-menstrual-health-products-to-girls/#:~:text=A%20UNE SCO%20report%20indicates%20that,following%20the%20onset%20of%20menstruation.>

⁴¹ <https://www.monitor.co.ug/uganda/oped/letters/wash-inequalities-are-endangering-women-s-health-and-education-4801736>

4.3 Computation of Cost of No-Action Associated with Key Diseases

The total number of reported cases from the MoH/HMIS system for the period of five years is indicated in table 4.1.

Table 4.1: Totals of Reported WASH-related Cases of Diseases Per Year

Disease Name		2020	2021	2022	2023	2024
Cholera		1,751	1,108	502	557	722
Typhoid		192,164	212,884	225,057	210,902	199,275
Dysentery		47,973	51,514	43,400	37,661	41,153
Diarrhea	Acute	1,518,951	1,249,927	1,247,272	1,079,166	1,270,529
	Persistent	57,473	57,829	57,351	48,530	46,889

Source: MoH Data

To derive the total costs, the actual number of cases in table 4.1 were multiplied by the unit costs derived in Annexure 4, which were modified to provide for variations due to inpatients and outpatients that were not revealed in the aggregated data. The average costs were skewed downwards due to dominance of outpatients who have relatively lower costs compared to inpatients.

The results in Table 4.2 show treatment costs of close to UGX 1.658 trillion for cases of Cholera, Typhoid, Dysentery, and Diarrhea. The table shows figures in both United States dollars (US\$), which was the main unit used in the reference materials (sources of data) and Uganda Shillings (UGX) for local applications.

Table 4.2: Estimation of costs based on Cases for 2020 - 2024

Disease	No of Cases	Unit costs (US\$)	Total (US\$)
Cholera	4,640	100	464,000
Typhoid	1,040,282	45	46,812,690
Dysentery	221,701	10	2,217,010
Diarrhea (Acute)	6,365,845	30	190,975,350
Diarrhea (Persistent)	268,072	30	8,042,160
Total in USD (Million)			248,511,210
Total in UGX (@UGX 6,673/US\$) ⁴²			1,658,315,304,330

Source: Research team

Furthermore, based on estimates of 30% of the cases not being reported in the HCFs, the total cost of treatment of the above cases increase to UGX 2.155 trillion. This is the cost of no-action to increasing funding of investments in the provision of WASH services.

The benefits of acting and increasing investments over the next five years are in form of reduced disease burden by 80%. This translates into savings on treatment costs by both government and households of UGX 1.724 trillion.

4.4 Analysis of the Macro level Costs of Inaction

The macro level analysis is based on income per capital, labor productivity, specific scenarios for sanitation, and overall GDP. Given the limitation of information on Uganda for most of the variables, the study adopted the methodology and findings by the World Bank on Tanzania⁴³ to compare the relevant parameters and characteristics and compute equivalent figures for Uganda. The process was also complemented by other academic and institutional reports. Table 4.3 shows selected socioeconomic

⁴² The Average Exchange rate for the five years

⁴³ World Bank, 2022. Tanzania Economic Update: Clean Water, Bright Future: The Transformative Impact of Investing in WASH. Issue 18.

and demographic indicators for Uganda and Tanzania that are part of the parameters used in the comparison.

Table 4.3: Selected Economic Indicators for 2024 (Unless indicated)

Indicator	Tanzania	Uganda
GDP (Current US\$ Billion)	78.8 (2024)	53.7 (2024)
GDP per capita (Current US\$)	1,185.7 (2024)	1,072.7 (2024)
GDP Growth (Annual %)	5.5% (2024)	6.1% (2024)
Population (Million)	68.56	45.91
Annual WASH-related deaths ⁴⁴ (% of population)	31,000 (0.045)	23,000 (0.050)
School days (Million) lost per annum (3 days/child)	33	25.8

Source: Various reports by Government MDAs, Country Statistical Abstracts, World Bank, and Academic institutions

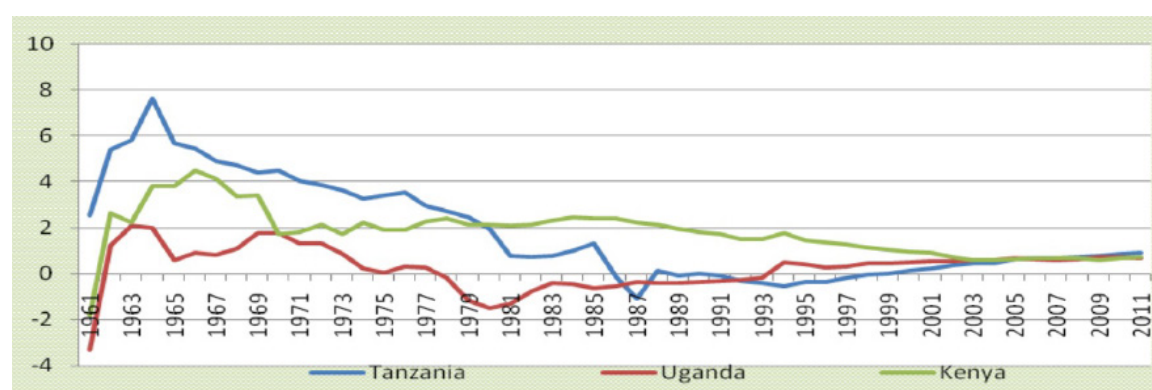
4.4.1 Costs on Overall GDP (Gross Domestic Product)

The studies on Uganda had a limited scope that might have underestimated the losses to the economy as the cost of inaction. The MoH and EPRC estimated the annual loss due to death and ill-health that in form of low productivity to be UGX 4 trillion⁴⁵ and UGX 5.9 trillion (2.9% of GDP)⁴⁶ respectively. The EPRC estimated the cost of time spent seeking healthcare or fetching water that reduced engagement in both income-generating activities and education at UGX 0.5 trillion.

In Tanzania, the cost was, which was captured as loss to growth of GDP through reduction in factor

productivity, was estimated at US\$1.4 billion or 1.9% of GDP. In Uganda the growth of GDP is largely driven by capital accumulation or investments in the stock of capital infrastructure by both public and private. While these investments have potential to create positive effects on humans, the literature shows Uganda lagging Tanzania in terms of contributions of human related factors to GDP growth partly due to low levels of productivity. Graph 4.1, by Bunini (2017), shows that Uganda had a lower TFP compared to Tanzania except for the period after 1993 when the later fell below before the two countries converged in 2002.

Graph 4.1: TFP growth by county, 1961-2011 (%)



Source: Bunini (2017)

The information in section 1.3 that affirmed a positive relationship between access to adequate WASH services and labor productivity is used to estimate the loss in terms of TFP. Based on comparisons with

the findings from Tanzania we estimate a loss of 1.4% of GDP per annum for Uganda that is equivalent to US\$ 0.756 billion for the GDP of US\$ 54 billion in 2025.

⁴⁴ Most are due to diarrheal diseases, respiratory infections, malnutrition, soil-transmitted helminths, environmental enteropathy, hepatitis A, and hepatitis E.

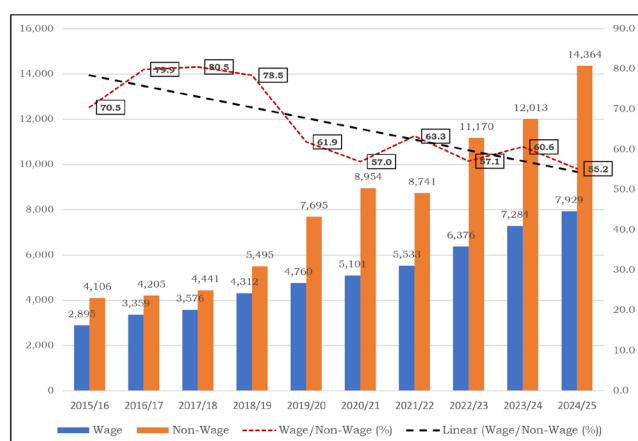
⁴⁵ <https://parliamentwatch.ug/news-amp-updates/govt-faces-ugx-4-trillion-annual-loss-due-to-water-sanitation-gaps/#:>

⁴⁶ <https://eprcug.org/press-releases/inadequate-investment-in-water-sanitation-and-hygiene-wash-services-cost-uganda-nearly-three-percent-of-gdp/#:~:text=>

4.4.2 Implications of loss in labor productivity

The relationship between WASH and labor productivity was partly through absenteeism or underperformance due to sickness, and the out-of-pocket treatment (OOP) costs that reduce the value of wages. Inadequate WASH services to staff are likely to reduce labor efficiency and productivity, which will translate into lower wages and profits. By adopting a proxy of the ratio of wages to non-wage recurrent expenditure we observed a decline (Graph 4.2) implying that the contribution of wages, which has a direct positive relationship to labor productivity, has been reducing. The fact that labor productivity is declining or stagnant, implies that the additional funding in non-wage was not spent in a way that improves WASH services. This could be due to competing demands and failure to ringfence and protect WASH budgets in the MDAs.

Graph 4.2: Total Wages and Non-wage (UGX Billions) and percentage of Wage to Non-Wage (%) for all Sectors/Programmes



Source: MFPED MTEF Data

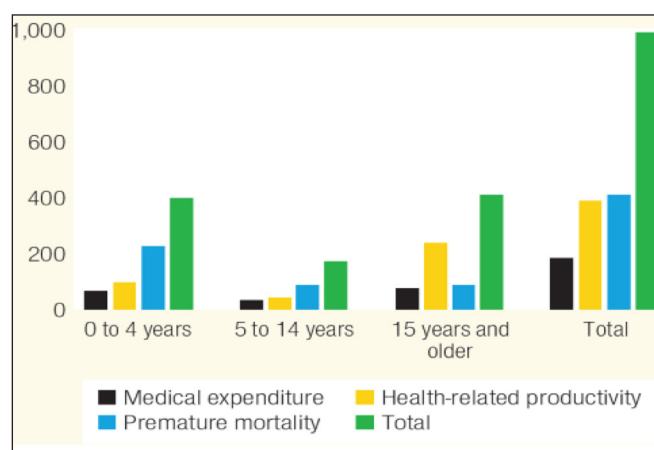
4.4.3 Per capita Costs related to WASH services

The analysis, based on comparisons with the findings for Tanzania, indicates the time lost due to sickness per person/capita was equivalent to US\$ 16 while the treatment costs were US\$ 10. About 35% of the health costs were borne by women and children under five, and poor households. Most of the losses (73%) were in rural areas that accommodate the bulk of the people, and where services are more inadequate and dispersed, which is associated with longer access times compared to urban areas.

4.5 Scenarios for impacts of future inaction and action

To get the costs and hence possible savings/benefits associated with various levels of WASH investments over the next 10 years, the study provided trajectories of possible reductions in the costs based on different scenarios. Starting with the case of Tanzania (Graph 4.3), the costs associated with medical expenditure were the least, followed by health-related reduction of productivity, and premature mortality⁴⁷. The inadequate provision of WASH services in Tanzania was responsible for over 10% of premature deaths that cost more than US \$ 2.4 billion each year or 3.2% of total GDP in 2022. The estimates did not fully capture the true scope of the damage in the form of excess medical costs and lost productivity. The costs due to reduced labor productivity and lost income were linked to losses of millions of working days due to related illnesses, time required to reach distant water and sanitation services.

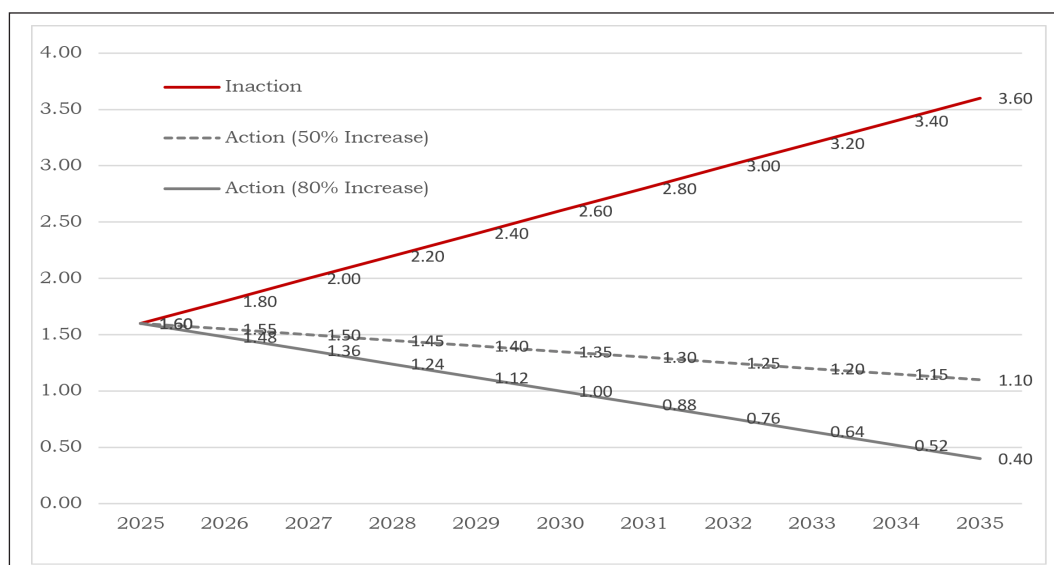
Graph 4.3: Total health costs due to poor WASH, by age group (US\$ Millions)



Considering the case of Uganda, the analysis of possible future trends was based on household survey data and TrackFin WASH results under three scenarios. The first scenario considered no action or inaction (no increment in of investment for the provision of WASH services), the second and third scenarios considered cases of sustained increases in investment by at least 50% and 80% over the next 10 years (till 2035). The baseline figure for the size of the economy in 2025 was US\$ 54 billion and presumed to grow at 10% to US\$ 140.06 billion over the 10-year period to 2035. The results are shown in Graph 4.3.

⁴⁷ World Bank Staff Estimates in the Study referred to at the beginning of this section.

Graph 4.3: Projected Economic Costs of WASH (US\$ Billion)



Source: Author's Computations

The trends show an increase from the first scenario while the second and third scenarios project a decrease in costs that translate into benefits. The 1st scenario indicates the costs will continue to increase by US\$ 200 million per year till 2035. However, an increase of 50% in the investment will translate into reductions in the losses of US\$ 50 million per year, increasing to US\$ 2.5 billion in 2035. The corresponding decreases in the costs associated with an increase of 80% in WASH related investments will decrease the losses by a much bigger margin of US\$ 120 million per year that will increase to US\$ 3.2 billion by 2035 compared to if the status quo was maintained.

The total costs of inaction over the period 2026–2035 are US\$ 27 billion. The figure is estimated to reduce to US\$ 13.25 billion and US\$ 9.4 billion if the funding levels are increased by 50% and 80% respectively. These benefits are in form of reductions in cost of medical care and death across all ages, increased productivity of people above 15 years, and greater economic growth. Other sources include reduced time for accessing services such as WASH and education, and elimination of open defecation.

4.6: Sectoral Cost of Inaction Analysis

The preceding sections quantified the cost of inaction on WASH through health, education, productivity, and macroeconomic pathways. However, the economic consequences of inadequate WASH services extend far beyond these aggregate measures into specific sectors of Uganda's economy. Poor WASH infrastructure undermines the competitiveness, productivity, and growth potential

of key economic sectors that collectively account for a substantial share of GDP, employment, and export earnings. This section presents a sector-by-sector analysis of the cost of inaction on WASH across six critical sectors: Tourism, Fisheries, Mining, Industry and Manufacturing, Energy and Hydropower, and Agriculture. For each sector, the analysis identifies the transmission pathways through which inadequate WASH generates economic losses, quantifies these losses where data permit, and highlights the investment case for action.

4.6.1 Tourism

Uganda's tourism sector earned a record USD 1.28 billion in revenue in 2024, contributing approximately 6.6 percent of GDP and supporting an estimated 803,000 jobs directly and indirectly. Tourism accounts for 16 percent of total exports, making it one of the country's most important foreign exchange earners. The Government of Uganda has set an ambitious target of USD 4 billion in tourism revenue by 2030, which would require tripling current earnings within six years. However, this growth trajectory is fundamentally threatened by inadequate WASH infrastructure across the tourism value chain.

Cost of Waterborne Disease Risk to Tourists

International tourists are acutely sensitive to health risks at destinations. Waterborne diseases such as travellers' diarrhoea, cholera, and typhoid pose significant risks at hotels, lodges, safari camps, and national park facilities across Uganda. Evidence from Southeast Asia demonstrates that tourism losses attributable to poor sanitation range from USD 17

million to USD 166 million per country annually, driven by medical costs incurred by tourists, shortened stays, and reduced spending. Applied proportionally to Uganda's tourism sector, even conservative estimates suggest annual losses of USD 30–50 million from health-related impacts on tourist satisfaction and spending patterns. Tour operators in the Lake Victoria region, Queen Elizabeth National Park, and Bwindi Impenetrable Forest have reported recurring challenges with water quality at tourism facilities, particularly during peak seasons when infrastructure is under greatest strain.

Reputational Damage and International Perception

The reputational cost of poor WASH infrastructure extends well beyond immediate health impacts. The European Union's recent commitment of EUR 20 million specifically to boost tourism standards in Uganda signals that WASH deficiencies are already a recognized barrier to the country's tourism competitiveness at the international level. This investment by the European Union, while welcome, effectively constitutes an acknowledgement that current WASH standards at tourism sites are insufficient to support the sector's growth ambitions. In an era of social media and online travel reviews, a single outbreak of waterborne illness at a major tourism site can generate negative publicity that takes years to overcome. Competing East African destinations, including Rwanda and Tanzania, are investing heavily in tourism WASH infrastructure, creating a growing competitive disadvantage for Uganda.

Suppressed Visitor Spending at Cultural and Lakeside Sites

Poor sanitation conditions at cultural heritage sites, lakeside destinations along Lake Victoria and Lake Bunyonyi, and community-based tourism enterprises directly suppress visitor spending and return visit rates. Tourists who encounter inadequate sanitation facilities at destinations tend to shorten their visits, reduce discretionary spending on local goods and services, and are significantly less likely to recommend the destination to others or return themselves. Community tourism, which offers the highest potential for distributing tourism benefits to rural populations, is particularly vulnerable because community-level WASH infrastructure is typically the weakest link. If Uganda is to achieve its USD 4 billion tourism revenue target by 2030, addressing WASH deficiencies across the tourism value chain is not optional but a prerequisite. The estimated cost of inaction on tourism WASH infrastructure ranges

from USD 50 million to USD 120 million annually in foregone revenue, reduced visitor spending, and lost competitive positioning, with cumulative losses potentially exceeding USD 500 million over the period 2026–2035.

4.6.2 Fisheries

Lake Victoria supports the world's largest freshwater fishery, yielding approximately one million tonnes of fish per year. The fisheries sector employs over 200,000 people directly in catching and processing, and supports the livelihoods of approximately four million people across the value chain, including traders, processors, boat builders, and net makers. Fisheries contribute 12 percent of agricultural GDP and provide over 50 percent of national animal protein consumption. Formal fish exports, predominantly Nile Perch fillets destined for European and Middle Eastern markets, generated USD 58.7 million in 2024, with the government targeting growth to USD 730 million. Despite this economic significance, the Cost of Inaction report has not previously quantified how poor WASH conditions undermine fisheries productivity, food safety, and export competitiveness.

Eutrophication, Fish Kills, and Declining Catches

Untreated sewage and sanitation waste discharged into Lake Victoria from riparian cities and towns, particularly Kampala, Entebbe, Jinja, and Mwanza (Tanzania), is a primary driver of eutrophication the excessive enrichment of water with nutrients that triggers algal blooms, depletes dissolved oxygen, and degrades fish habitat. Eutrophication has been linked to recurrent mass fish kills in Lake Victoria. In 2021 alone, over 100 tonnes of Nile Perch were lost in a single fish kill event, representing approximately USD 400,000 in lost revenue from that incident alone. These events are increasing in frequency and severity as nutrient loading from inadequate sanitation grows alongside urbanization. The degradation of water quality in Lake Victoria also reduces the productivity of breeding grounds, leading to long-term declines in fish stocks that threaten the sustainability of the entire fisheries sector.

Food Safety Losses Along the Value Chain

The World Bank has documented that contamination occurs at every stage of the fisheries value chain in East Africa, from landing sites to processing facilities, transport, and retail markets. Inadequate water supply and sanitation at fish landing sites compromises the cold chain and enables bacterial contamination that reduces product quality and shelf life. For Uganda's fish export industry, which

must meet stringent European Union food safety standards (including EU Regulation No. 853/2004), WASH deficiencies at processing plants have historically resulted in temporary export bans and downgrading of export certifications. Each export disruption costs the industry millions of dollars in rejected shipments and lost market access, with the reputational effects persisting long after the specific issue is resolved.

Water Hyacinth Proliferation

Water hyacinth, an invasive aquatic weed whose proliferation is driven in part by nutrient loading from poor sanitation, imposes enormous costs on Lake Victoria's fisheries. The economic impact of water hyacinth across the Lake Victoria basin has been estimated at approximately USD 350 million per year, affecting fishing operations, transport, water supply infrastructure, and hydropower generation. For Uganda's fishing communities, dense water hyacinth mats block fishing routes, reduce accessible fishing areas, degrade fish habitat, and damage fishing equipment. The experience of Cambodia is instructive: economic losses from poor sanitation in Cambodia's Tonle Sap fishery were estimated to equal the entire fishery sector's GDP contribution, demonstrating the potential scale of losses when sanitation-driven water quality degradation affects a major freshwater fishery. The total estimated cost of inaction on WASH for Uganda's fisheries sector, including catch losses, export revenue foregone, food safety costs, and water hyacinth impacts attributable to sanitation failures, is conservatively estimated at USD 80–150 million annually.

4.6.3 Mining

Uganda's mining sector, while still developing relative to regional peers, encompasses significant gold mining operations in the Lake Victoria basin, mineral extraction (including tin, tungsten, and tantalum) in Karamoja and southwestern Uganda, and expanding limestone and aggregate quarrying to support construction. Mining accounts for up to 10 percent of industrial water use in Africa, and studies indicate that 15 percent of unplanned mine downtime has been linked to water quality issues. As Uganda seeks to develop its mining sector as a driver of economic transformation, the intersection of WASH infrastructure and mining operations presents both challenges and costs that remain unquantified in current policy analyses.

Production Losses from Contaminated or Insufficient Water Supply

Mining operations require substantial volumes of

water for mineral processing, dust suppression, and worker welfare. When water sources are contaminated by upstream sanitation failures or are insufficient due to competing demands from communities lacking their own WASH infrastructure, mining operations face production disruptions and increased treatment costs. Artisanal and small-scale gold mining in the Lake Victoria basin, which provides livelihoods for tens of thousands of miners, is particularly vulnerable because operations typically rely on untreated surface water. Contaminated water inputs reduce mineral recovery rates, increase processing costs, and can compromise the quality of mineral concentrates destined for export. The Uganda Water Accounts 2023 documented that industrial water use increased by 19.8 percent between reporting periods, reflecting growing demand that, in the absence of adequate WASH infrastructure, intensifies competition for water resources.

Mine-Community Water Conflicts

Where WASH infrastructure is inadequate, communities and mining operations are forced to compete for the same limited water sources. This competition generates conflicts that can disrupt mining operations through community protests, blockades, and legal challenges. In Uganda's Karamoja region and the gold mining areas around Busia and Namayingo, mine-community water conflicts have resulted in operational shutdowns, increased security costs, and delayed exploration activities. International experience demonstrates that social licence to operate, which depends heavily on adequate community water and sanitation provision, is a critical factor in mining investment decisions. Mining companies that face persistent community water conflicts typically incur additional costs of 5–15 percent of operating expenditure in community relations, legal defence, and operational disruptions.

Compliance Costs and Regulatory Requirements

Kenya, Tanzania, and Uganda have all recently strengthened water management requirements for mining licences, reflecting growing recognition of the sector's water impacts. Uganda's National Environment Act and the Mining Act require environmental impact assessments and water management plans, yet the absence of baseline WASH data and the lack of municipal sanitation infrastructure in mining areas make compliance both more costly and more difficult. Mining companies are increasingly required to invest in water treatment and community WASH infrastructure as conditions

of their operating licences, costs that would be substantially lower if public WASH infrastructure were adequate. The estimated cost of inaction on WASH for the mining sector, including production losses, conflict-related costs, and excess compliance expenditure, ranges from USD 15–40 million annually, with these costs expected to rise as the sector expands.

4.6.4 Industry and Manufacturing

Uganda's manufacturing sector is a cornerstone of the country's industrialization strategy. According to the Uganda Water Accounts 2023, manufacturing requires 15.9 percent of direct non-energy water use, while 41.2 percent of final water use is embodied in manufactured products when upstream water inputs are included. The sector is particularly water-intensive in food and beverage processing, textiles, and agro-processing, which collectively account for the majority of manufacturing output. Inadequate WASH infrastructure affects the manufacturing sector through three principal channels: worker productivity losses, water quality and treatment costs, and product quality and market access constraints.

Worker Productivity Losses

The World Bank estimates that poor sanitation and inadequate water supply result in economic losses of USD 260 billion annually across developing countries, equivalent to 1.5 percent of GDP. A significant portion of these losses occurs through reduced worker productivity in industrial settings. Seventeen percent of workplace deaths globally are caused by disease transmission, much of it linked to inadequate workplace WASH. In Uganda's manufacturing sector, WASH-related illnesses, including diarrhoeal diseases, typhoid, and skin infections, contribute to worker absenteeism and reduced on-the-job productivity. Factory workers in Kampala Industrial Area, Jinja's industrial zone, and agro-processing facilities in the eastern and western regions frequently lack access to adequate sanitation facilities and clean water at their workplaces. Based on the global estimate of 1.5 percent GDP loss from poor WASH and Uganda's manufacturing sector output, the productivity cost to Uganda's manufacturing sector from inadequate workplace WASH is estimated at USD 40–70 million annually.

Water Quality and Treatment Costs for Industrial Users

Manufacturing operations, particularly in food and beverage production, require water that meets

specific quality standards. When municipal water supply is contaminated by inadequate upstream sanitation, industrial users must invest in additional water treatment infrastructure and operational expenditure to achieve the required quality. These treatment costs, which include filtration, chemical treatment, and quality testing, are directly attributable to poor public WASH infrastructure and represent a hidden tax on Uganda's manufacturing competitiveness. The National Environment Management Authority has identified industrial water pollution as the second-biggest environmental threat in Uganda after deforestation, with most enterprises employing outdated production technologies and lacking adequate effluent treatment. This creates a vicious cycle where poor sanitation contaminates water sources, increasing treatment costs for downstream industrial users, who in turn generate waste that further degrades water quality.

Product Quality, Export Standards, and Market Access

Inadequate WASH in industrial zones directly affects the quality of manufactured products, particularly in food processing, beverages, and pharmaceuticals. Products manufactured with poor-quality water or in facilities lacking adequate sanitation may fail to meet international quality and safety standards, limiting access to premium export markets. For Uganda's agro-processing industry, which is central to the value-addition strategy for agricultural exports, WASH deficiencies at processing facilities have been cited as barriers to achieving internationally recognized food safety certifications such as HACCP and ISO 22000. The total estimated cost of inaction on WASH for Uganda's industry and manufacturing sector, encompassing productivity losses, excess water treatment costs, and lost market access, is estimated at USD 60–120 million annually.

4.6.5 Energy and Hydropower

Uganda's electricity generation capacity reached 2,052 megawatts (MW) in 2025 following the commissioning of the 600 MW Karuma Hydropower Plant, financed through a USD 1.7 billion investment predominantly from China's Exim Bank. Hydropower accounts for approximately 80 percent of Uganda's electricity generation, with major installations including Bujagali (250 MW), Karuma (600 MW), Isimba (183 MW), Nalubaale/Kiira (380 MW), and over 29 small-scale hydropower stations, many concentrated in the Rwenzori Mountains and Mount Elgon. The sector's dependence on Lake Victoria as a primary reservoir and on the Nile River system creates a direct vulnerability to upstream WASH and

watershed conditions.

Sedimentation and Turbine Maintenance Costs

A feasibility study in the Rwenzori Mountains, conducted by Future Water and WWF, documented that watershed degradation increases sediment loads by up to 30 percent. Sediment-laden water entering hydropower reservoirs and turbines causes accelerated equipment wear, reduces turbine efficiency by up to 12 percent, and increases maintenance costs. International research on hydropower in Africa confirms that increased maintenance costs from turbine and equipment wear, decreased water quality affecting downstream ecosystems, and shortened reservoir lifespan are all consequences of poor watershed management. For the Rwenzori region specifically, unsustainable land use practices caused by poor upstream communities, including communities lacking adequate WASH infrastructure, lead to loss of soil fertility through erosion, costs to hydropower companies through the abrasive impacts of sediments, sedimentation issues for water utilities and water infrastructure, and reducing baseflows that affect hydropower production. The annual cost of excess sedimentation to Uganda's hydropower sector, including accelerated turbine replacement, increased maintenance schedules, and reduced generation efficiency, is estimated at USD 25–60 million.

Wetland Encroachment and Disrupted Water Flows

Uganda has lost over 40 percent of its wetlands since 1994, with nearly half of the wetlands in the Lake Kyoga basin converted to cultivation of rice, sugar cane, and maize. According to the Ministry of Water and Environment, approximately 30 percent of wetlands nationally have been degraded over the past three decades. Wetlands play a critical role in regulating water flows, filtering pollutants, and maintaining the hydrological balance that sustains hydropower generation. The destruction of wetlands, driven in part by communities lacking alternative livelihoods due to poor WASH and related infrastructure, disrupts the water flow patterns on which hydropower stations depend. During dry seasons, degraded wetlands release less stored water, reducing river flows and power generation capacity. During wet seasons, the loss of wetland buffering capacity increases flood risk and sediment transport.

Cascading Economic Losses from Power Disruptions

Power disruptions cascade across all sectors of the economy. A study by Columbia University documented that electricity outages in Uganda impose significant financial impacts on the utility company and downstream economic activities. African enterprises experience power interruptions averaging more than 50 hours per month, equivalent to a loss of 25 days of economic activity per year. The estimated backup self-generation cost in Africa is USD 0.47 per kilowatt-hour, approximately three times higher than cost-reflective tariffs of grid-supplied energy in Uganda (USD 0.17 per kilowatt-hour). When water quality and quantity problems upstream of hydropower stations contribute to generation shortfalls, the economic losses ripple through manufacturing, agriculture, services, and households. The total estimated cost of inaction on WASH for the energy and hydropower sector, including sedimentation costs, reduced generation from watershed degradation, and downstream economic losses attributable to WASH-related power disruptions, is estimated at USD 40–90 million annually.

4.6.6 Agriculture

Agriculture is the foundation of Uganda's economy, contributing 24 percent of GDP, generating 35 percent of export earnings, and employing 68 percent of the labour force. With 80 percent of its land classified as arable and diverse agroecological zones supporting crops from coffee and tea to cereals and root crops, Uganda possesses enormous agricultural potential. The sector is central to the government's structural transformation agenda, with agro-industrialization identified as the primary pathway for job creation, poverty reduction, and broad-based prosperity. However, agricultural productivity remains constrained by multiple factors, among which inadequate WASH infrastructure plays an underappreciated but significant role.

Water Contamination and Crop Productivity

Agricultural runoff contaminated with pathogens from inadequate sanitation, combined with the use of contaminated irrigation water, directly affects crop health and yields. The National Environment Management Authority has identified agricultural runoff as a major contributor to water pollution, with farmers often using fertilizers and pesticides that seep into water bodies alongside sanitation-derived contaminants, causing eutrophication and algal blooms. Contaminated irrigation water introduces

pathogens into the food production system at the farm level, affecting both crop quality and food safety. According to the Ministry of Water and Environment, 47 percent of principal water sources in some regions are polluted and unfit for domestic use, with similar implications for agricultural water quality. For Uganda's predominantly rain-fed agriculture, which is already severely affected by climate variability, any contamination of the limited irrigation water available further reduces the already low crop yields.

Post-Harvest Losses and Food Safety

Between 30 and 50 percent of food produced in Uganda is lost within the first three months after harvest, driven by inadequate infrastructure, ineffective post-harvest management, and poor processing conditions. WASH deficiencies at farm-level processing sites, collection centres, and rural markets contribute directly to these losses by enabling contamination and spoilage. The water used annually to grow food that is ultimately wasted would be sufficient to meet the domestic water needs of billions of people globally, underscoring the intimate connection between WASH infrastructure and food system efficiency. For export-oriented agricultural products, including coffee, tea, vanilla, and fresh produce, food safety failures linked to poor WASH at processing facilities can trigger rejection at international borders. Coffee production, Uganda's largest agricultural export employing approximately 1.7 million smallholder farmers, is projected to halve by 2050 due to climate change, with water stress and quality being compounding factors. Losses from post-harvest waste attributable to WASH-related contamination and poor processing conditions are estimated at 16–18 percent of total crop production.

Agricultural Worker Health and Productivity

Agricultural workers, who constitute the majority of Uganda's labour force, are disproportionately affected by inadequate WASH services. Workers suffering from WASH-related illnesses, including diarrhoeal diseases, intestinal parasites, and skin infections, experience reduced physical capacity and increased absenteeism during critical planting and harvesting periods. Women, who perform the majority of agricultural labour in Uganda, bear a triple burden: they are more vulnerable to WASH-related illness, spend more time collecting water (reducing time available for farming), and are the primary caregivers for children sick with waterborne diseases. The Auditor General of Uganda reported that the agriculture sector lost UGX 77.3 billion (approximately USD 20 million) in a single year due to extreme climate-related weather events, losses that

are compounded by WASH-related health impacts on the agricultural workforce.

Climate Vulnerability and the Water-Agriculture Nexus

Climate change is projected to impose devastating losses on Uganda's agricultural sector, with coffee production projected to halve by 2050 (incurring losses of USD 1.2 billion), tea and cotton facing significant declines, and food crop losses potentially reaching USD 1.5 billion by 2050. Water demand is projected to increase dramatically, with losses from water stress totaling approximately USD 237 million yearly, affecting irrigation, livestock, and domestic consumption. In this context, WASH infrastructure is not merely a health issue but a fundamental component of agricultural climate resilience. Adequate sanitation protects water sources from contamination, preserving their utility for irrigation. Improved water infrastructure enables more efficient agricultural water use. Healthy workers are more productive and better able to adopt climate-adaptive farming practices. The total estimated cost of inaction on WASH for Uganda's agriculture sector, encompassing crop losses from contaminated water, post-harvest waste, worker productivity impacts, and increased climate vulnerability, is estimated at USD 100–250 million annually, with these costs expected to accelerate as climate change intensifies.

4.6.7 Summary of Sectoral Costs of Inaction

The table below summarizes the estimated annual cost of inaction on WASH across the six sectors analyzed in this section. These estimates are conservative and represent direct and quantifiable losses; the full economic impact, including indirect effects, multiplier effects, and long-term structural damage, is likely to be substantially higher.

Sector	Estimated Annual Cost of Inaction (USD millions)
Tourism	50 – 120
Fisheries	80 – 150
Mining	15 – 40
Industry and Manufacturing	60 – 120
Energy and Hydropower	40 – 90
Agriculture	100 – 250
Total Estimated Range	345 – 770

The combined sectoral cost of inaction on WASH is estimated at USD 345–770 million annually. These

sectoral losses are largely additional to the health, education, and productivity costs quantified in the preceding sections of this report, as they capture sector-specific transmission pathways that are not fully reflected in the aggregate macroeconomic estimates. When combined with the previously estimated annual cost of inaction of USD 177 million (per the World Bank's 2013 estimate) and the more recent estimates of 2.9 percent of GDP (approximately USD 1.8 billion at current GDP levels), the sectoral analysis confirms that the total economic burden of inadequate WASH investment in Uganda is substantially higher than previously understood.

These findings reinforce the central argument of this report: that WASH is not a standalone social sector

issue but a cross-cutting economic imperative. Investment in WASH infrastructure generates returns across all sectors of the economy, and the cost of continued inaction compounds with each year of delay. The evidence presented in this section provides sector-specific advocacy material for engaging stakeholders in tourism, fisheries, mining, manufacturing, energy, and agriculture, all of whom have direct financial interests in improved WASH service delivery.

SECTION 5.0:

WASH FINANCING IN UGANDA

The financing profile for provision of WASH services is comprised of multiple sources from the public and private sector as well as DPs and NGOs/CSOs. The public sector financing comes from domestic and external sources (loans and grants) by DPs. The major funders among the DPs include World Bank, African Development Bank (AfDB), KfW, EU, EIB, AFD, UK Export Finance (UKEF), Austrian Development Agency (ADA), UN Agencies, JICA and the Climate Change Adaptation Fund (CCAF). The private sector financing comes from households, businesses (education, health, and real estate developers, etc.), financial institutions and social investors.

5.1 The Practice of WASH Budgeting in Uganda

The budgeting for WASH involves all stakeholders although the focus is often put on the public sector component. This specific focus results in underestimation of the total funding to the sector and narrowing the scope of engagement and advocacy for increased resource mobilization and deployment or advocacy by other critical actors. The report takes a broad appreciation of the various contributors to funding for WASH.

5.1.1 Budgeting for WASH in the Public Sector

The budgeting for WASH is done within the broader framework where the MoFPED, MWE, MoH and MoES, set guidelines for LGs to develop sector-specific grants to implement the projects. The guidelines for schools and HCFs support the alignment to standards of government. The guidelines provide for management requirements and detailed characteristics of specific infrastructure such as ratios of latrine stances per pupils in schools, access to safe drinking water, and facilities for menstrual hygiene management and disposal of medical waste⁴⁸. The Guidelines also provide information on the utilization of Conditional Grants (CGs) within the Non-Wage Recurrent (NWR) component of the budget from the Central Government (CeG).

The budgeting process has provisions to direct and protect WASH budgets from being diverted but no clear mechanisms to increase the amounts.

The finances are partly limited by lack of diversified sources that act as a constraint to both government and households. For example, the Government contribution in form of a capitation grant under the Universal Primary/Secondary Education (UPE/USE) policy of about UGX 7,000 (US\$ 2) per term, is not adequate for all the necessary WASH services. Similarly, the non-wage recurrent budget of the MoH out of which the Primary Health Care (PHC) budget is derived, is heavily constrained as it must address several other aspects of preventive health.

In the health sector, several HCFs are already using out of pocket (OOP) to supplement the health care costs by asking households to supplement budgets for the provision of certain requirements like drugs and supplies. The OOP financing must, however, be subjected to selective subsidy for inclusion. The contributions by communities, DPs, and NGOs are a major source of financing in the sector. In addition, the budget for NWSC is dominated by tariff collections that mostly provide for operations and maintenance. This implies that part of the budgets for WASH in entities under the public sector are embedded within the provisions by the private sector.

5.1.2 Budgeting for WASH in the Private Sector

Budgeting for WASH in the private sector involves corporates, business entities, social service institutions and households who provide for both CAPEX and OPEX. There is a big component of WASH in real estate buildings that work as offices, shopping malls, fuel stations, cafes/restaurants, private schools and HCFs as well as residential houses for business and personal use. The funds are raised from a multiplicity of sources including regular incomes such as salaries and sales from business operations, bank loans, fees, and other charges in the case of schools and HCFs. Financial Institutions (FIs) provide general and specific loans for the real estate (both corporate and individual households) to construct WASH facilities as well as business entities involved in the production and trading of WASH materials.

⁴⁸ The requirement for Day schools, the minimum requirement is one stance for every 25 students (up to 100), and one for every 40 students thereafter. For boarding schools, the ratio is one stance for every 15 students. For mixed-gender schools, that need MHM services, a separate, lockable, and private sanitary facilities, as well as a disposal system for consumables, are required. All schools should have a sufficient supply of safe drinking water and accessible handwashing facilities with soap.

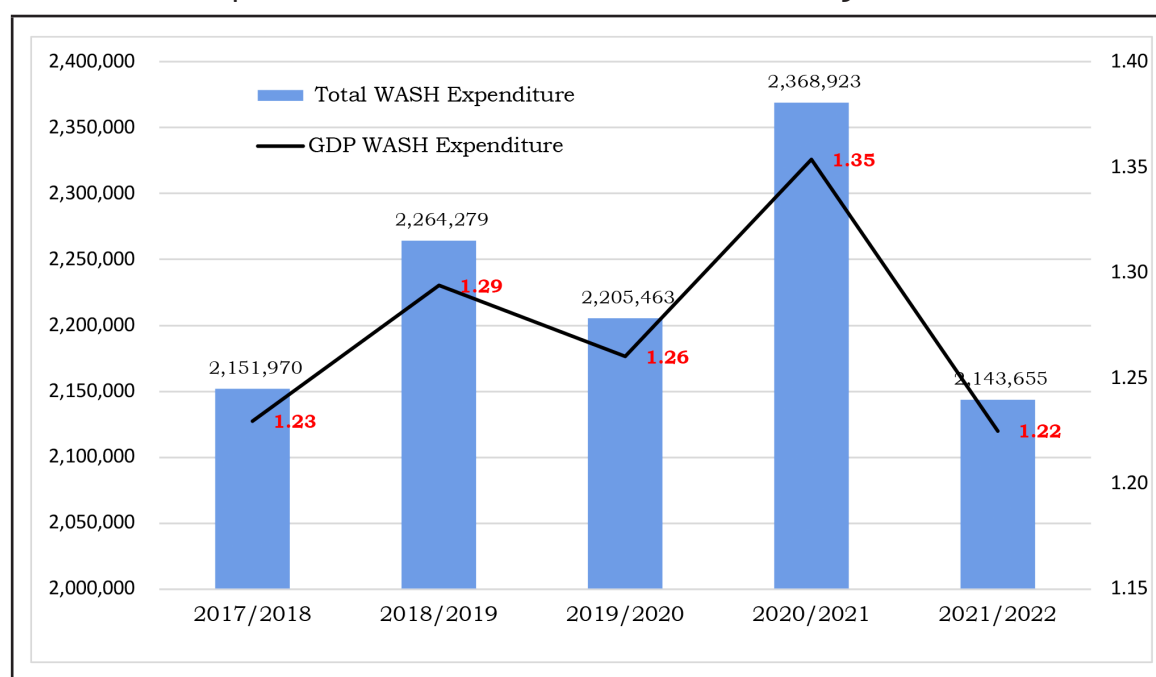
5.2 Computation of Funding for WASH in Uganda

The quantification of the funding for WASH, given the background in 5.1, demands a comprehensive approach that covers sources from both the public and all actors in the private sector. The types of funding and sources are so diversified and inter-linked to an extent that some of the sources/funders like households are also the users. Furthermore, private schools and corporate entities often take loans from FIs that are paid back through fees and

rental income paid by households or businesses.

To address the complexity of tracking sources and uses of funds, the report adopted findings based on the TrackFin methodology that was developed by WHO and partners to track WASH financing within member countries. Uganda implemented two cycles of TrackFin covering the period from 2016/17 to 2022/23. The data (Graph. 5.1) shows total WASH expenditure by the public and private sector in millions of shillings as well as the expenditure as a percentage of GDP.

Graph. 5.1: Total WASH expenditure (UGX millions and as a % of GDP) for Uganda



Source: TrackFin Reports

The major WASH funders include the following:

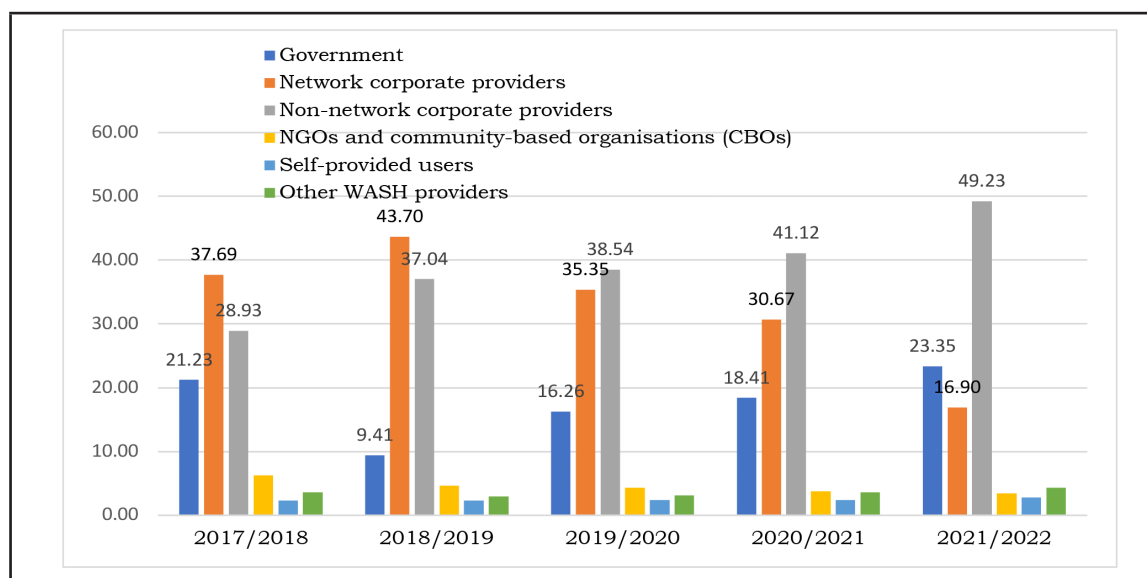
- Government – central, regional, and local authorities.
- Multi-lateral and Bi-lateral development partners.
- Financial institutions including development and commercial banks, SACCOs and individual money lenders.
- Network providers who are entities that own and/or operate facilities for production and distribution of water and sanitation services through network systems for the public, as well as for bulk services. They may be publicly owned like NWSC or privately owned like Umbrella organizations or large Plantation estates. They are mandated or independently provide a public service or self-provide the service for own use.
- Non-network corporate providers supply WASH goods such as bottled water, water tanks, plumbing equipment or other services along the value chain through non-network systems. They include real estate developers involved in infrastructure construction. They take various organizational forms from large companies, cooperatives to small businesses and may be formal or informal.
- Non-Government Organizations and Community Based Organizations (CBO)s.
- Self-providers or users who include households and institutions (commercial, industrial, etc.) that pay providers of WASH services and/or self-provide the services themselves. They may pay up-front through

initial investments and/or purchase the services from a variety of providers such as water tankers and pay recurrent costs such as the purchase of hygiene products like soap.

indicated in Graph. 5.2 and shows a dominance of non-network corporate providers, network corporate providers and self-providers (mainly households).

The contributions of the major funders of WASH are

Graph. 5.2: Main providers of WASH funding in Uganda (%).

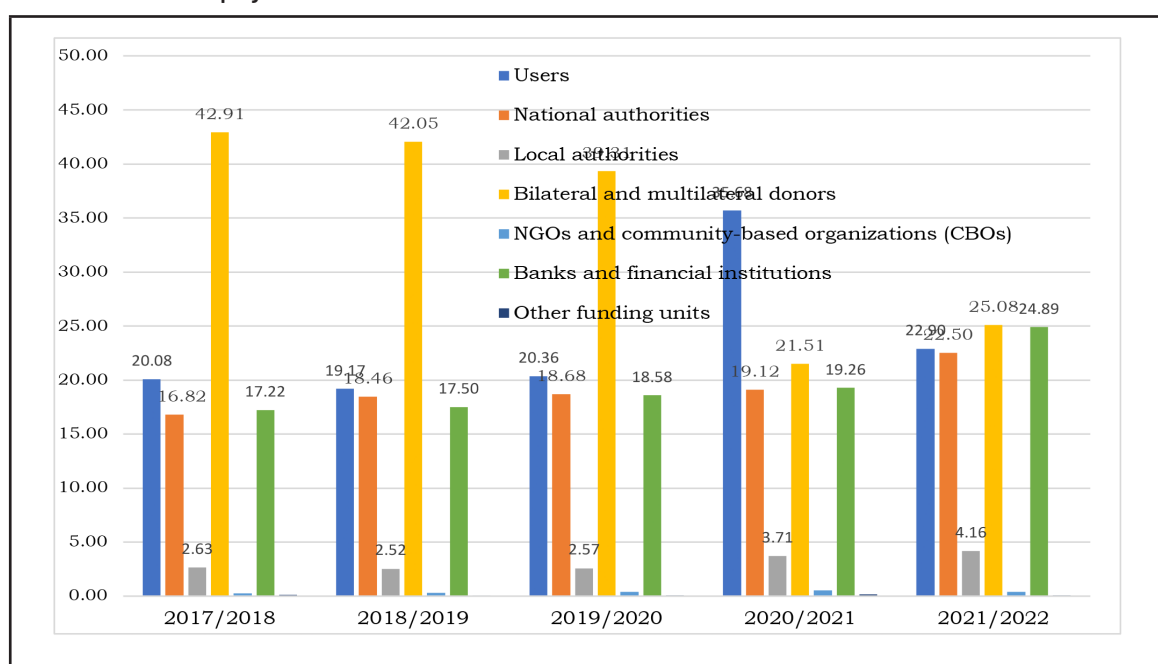


Source: TrackFin Reports

Graph 5.3 shows the entities that pay both CAPEX and OPEX for WASH services. This is based on the actual provision of the funds but does not necessarily imply bear the final cost of the service. They include DPs who provide loans that build infrastructure that is managed by the NWSC, households for self-provided WASH, as well as the CeG that provides grants to

LGs. In addition, users (households and institutions like private schools and HCFs) can pay for equipment such as rain harvesting, water pumps, and plumbing materials from service providers. The Financial Institutions pay WASH through provision of loans to households, education and HCFs, and real estate developers.

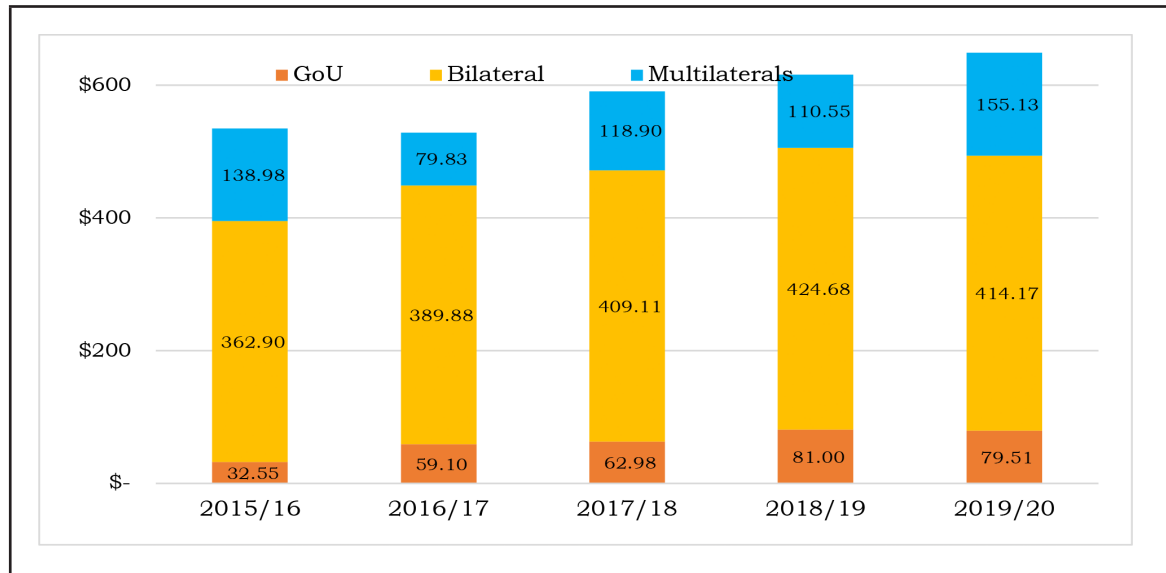
Graph. 5.3: Entities that pay for WASH Services (%)



5.3 The Public sector budgets

The public sector budget under the MWE is mainly provided by GoU and DPs as shown in Graph. 5.4. It is dominated by the bilateral DPs who contribute more than 60%.

Graph. 5.4: Composition of Public sector budgets in Uganda (US\$ million)

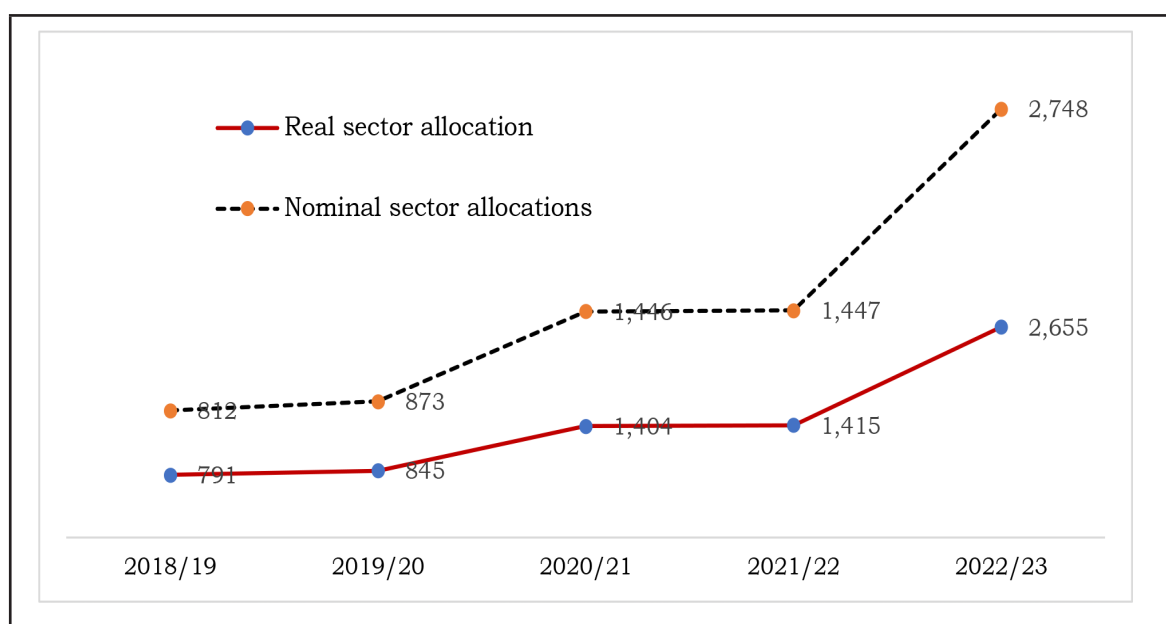


Source: National Budget Framework Papers (FY 2014/15 – FY 2019/20)

The public sector financing is mainly channeled through the following broad programmes: Rural Water Supply and Sanitation; Urban Water Supply and Sanitation; Water for Production; Water Resources Management; and Policy Planning and Support Services. The trends of the financing, in nominal and real terms depicted in Graph 5.5, show that,

despite the increase, the allocation is still below the planned annual financial requirement of over UGX 5.1 trillion that is expected to increase to UGX 10 trillion by 2030⁴⁹. More so, in terms of real budgets that reflect the effect of inflation, there is a decline that can be associated with reduced effectiveness in the delivery of the required services.

Graph 5.5: Trends in WASH sector Budgets in UGX Billions



Source: National Budget Framework Papers (FY 2018/19 – FY 2022/23)

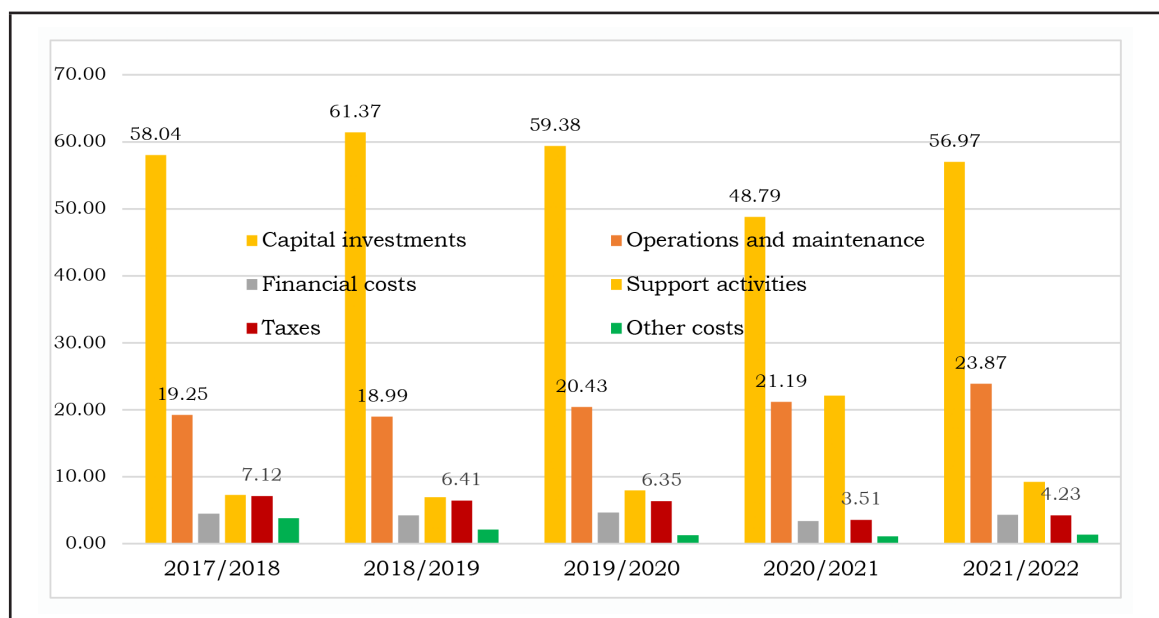
⁴⁹ <https://mwe.go.ug/documents/MWE-Strategic-Development-Plan-FINAL-20-6-25.pdf>

5.3 Major components of WASH Expenditure

The bulk of the budget (over 49 – 50%) is allocated to capital investments followed by O&M (19 – 24%)

and support activities (6 – 22%) – See Graph. 5.6. For example, in FY 2023/24, the largest share (58.1%) of the WASH budget was directed to capital development with only 2.7% spent on O&M.

Graph. 5.6: Major expenditure items in WASH (% of Total budget)



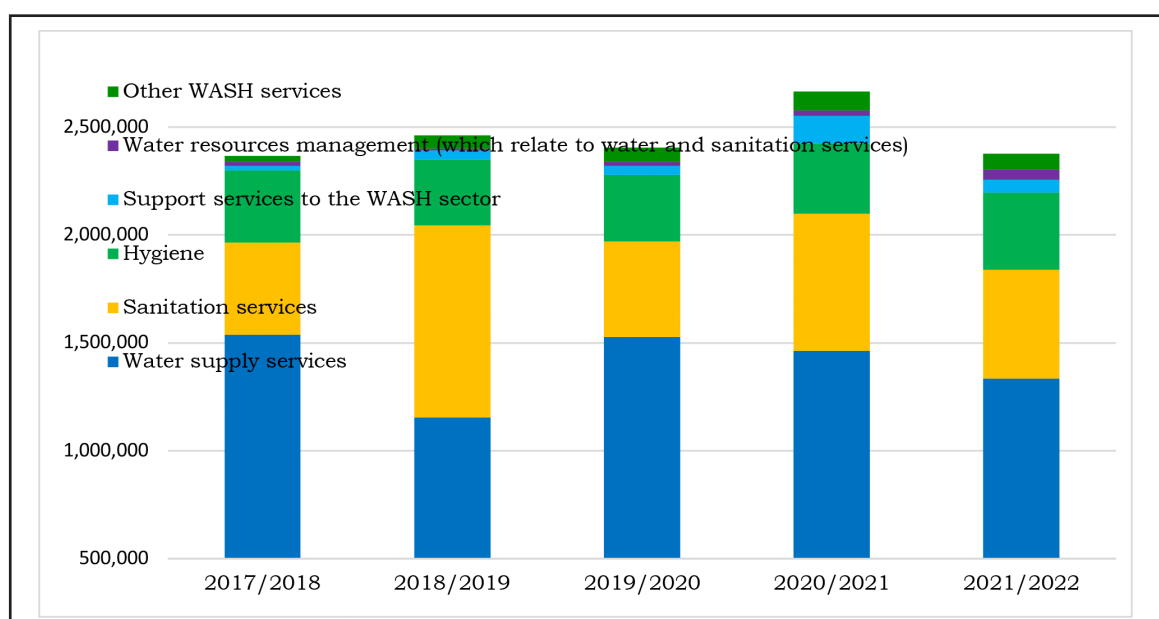
Source: Analysis by the TrackFin Methodology Uganda Team

The figure also shows additional items that are often not reflected under WASH spending records. These include taxes (4% – 6%) and financial costs such as interest on loans and bank charges (4% – 6%). Taxes are mainly on utility charges, project implementation, and a range of inputs.

5.4 Allocation of budgets to the different WASH services

The budget allocations are dominated by WASH services delivery (See Graph. 5.7. A very small component of the total budget was allocated to water resource management and support services to the WASH sector.

Graph 5.7: Allocation of budgets to various WASH services (UGX Millions)



The trends reveal several challenges in areas of sustainability and adequacy of budgets. For example, despite the dominance of the allocations for the provision of water supply services, there is a lot of volatility across years, which undermines service delivery and sustained capital investments required for a growing population like Uganda. Furthermore, the small allocations to recurrent spending are not likely to be adequate for critical aspects such as community sensitization, behavioral change, and monitoring. Limited funding for O&M undermines the sustainability of the infrastructure investments that can become non-functional in the medium to long-term⁵⁰.

5.5 Challenges to public sector financing

The challenges include low prioritization, concentration in a few areas of WASH, erratic or volatile allocations, and budget cuts/reductions during implementation. This is partly due to the tendency of policy makers considering the WASH sector as a non-economic productive one compared to others like energy and roads.

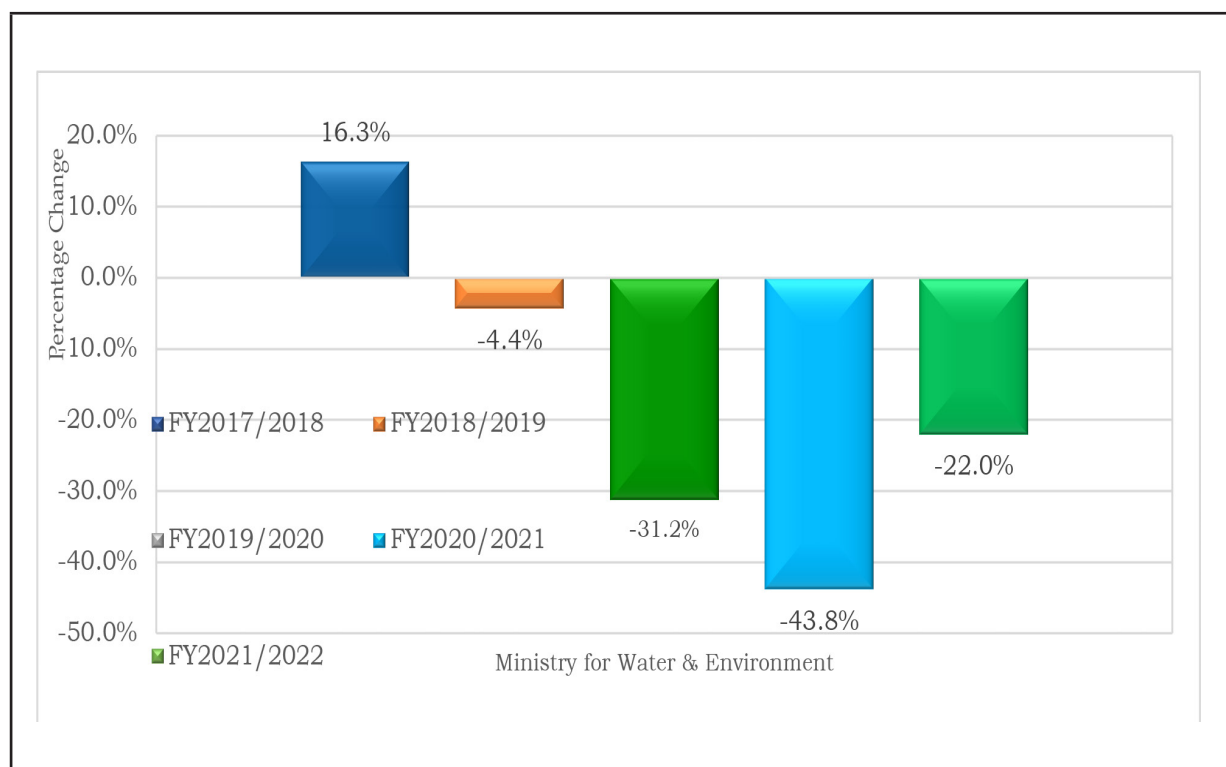
First, financing is characterized by concentration on a few areas of WASH partly due to project-based financing. Although the period between 2016/17 and

2018/2019 saw a significant rise in WASH spending from UGX 309 billion to UGX 945 billion, it was largely due to increased external funding for an urban project.

Second, the budgets are characterized by volatility, reflected by increases and decreases within a short span of time. For example, the budget of UGX 547 billion for FY 2019/20 increased to UGX 815 billion in FY 2020/2021 before decreasing to UGX 688 billion in FY 2021/22.

Third, uncertainty is caused by variations in approved budgets and actual releases, with the latter always being lower. For example, the actual allocation for 2023/24 was UGX 1,045 billion compared to the approved amount of UGX 1,342 billion. Graph 5.8 below shows the variations between the approved and released budgets for selected years. In FY 2018/19, FY 2019/20, FY 2020/21, and FY 2021/22, the MWE experienced shortfalls in the approved budget of -4.4%, -31.2%, -43.8%, and -22.0%, respectively. The magnitude of the shortfalls is beyond the recommendation of expenditure outturns ideally within 5% of the approved budget by the Public Expenditure and Financial Accountability (PEFA).

Graph. 5.8: Shortfalls in a budget by MWE (% deviation from the approved budgets)



Source: UNICEF (2023)

⁵⁰ In 2023, about 280 out of the 722 water systems (38.7 %) across the country were reported as being partially functioning or non-functional (MWE, 2023).

5.6 A review of the External budget for WASH

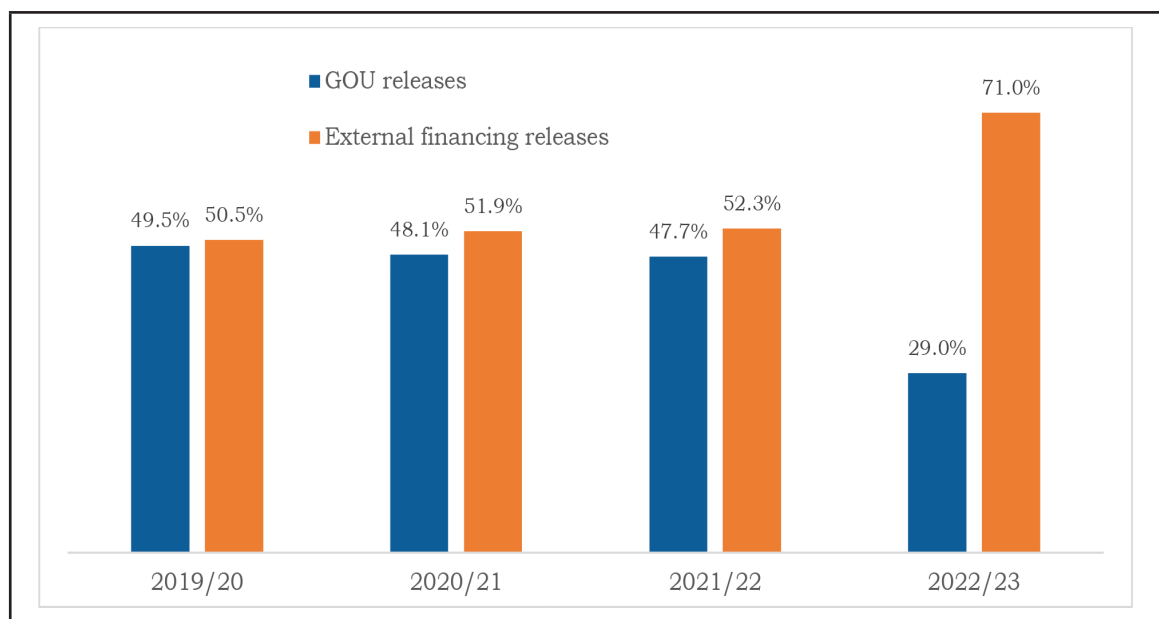
External (donor) financing has been increasing gradually as a component of the entire budget for the sector with its contribution reaching 50% – 70%

(See Graph 5.9). The external budget releases increased from 50.5% in 2019/20 to 71% in 2022/23, which can be a sign of risks and uncertainty that

undermine budget credibility and sustainability.

A breakdown of the external financing component shows that the African Development Bank has generally been the major on-budget financier of the WASH sector.

Graph. 5.9: Total WASH financing for the public sector for selected years (%)



Source: Annual Budget Performance reports (2019/20-2022/23)

The emerging developments that are disrupting global relationships that underlie the commitments of DPs should be of concern to Uganda. Alternative sources of funding are required to ensure sustainability and predictability of delivery of

services. Diversification of funding sources and innovative approaches are key to realization of national goals in WASH as expressed in the WASH and Health National Adaptation Plans, NDP IV and other documents.

SECTION 6.0: CONCLUSIONS AND RECOMMENDATIONS

Inaction deepens inequality and human capital losses. Rural areas bear 73% of the losses from poor WASH. Women, children under five, and poor households bear 35% of health costs. Girls disproportionately suffer through absenteeism, with an estimated 10% dropping out due to poor menstrual hygiene management.

The report shows that inadequate investments for the provision of WASH services have wide-ranging negative implications for the wellbeing of the population and the economy. The fact that WASH has direct linkages with the state and wellbeing of human capital translates into loss of productivity of labor, increase in diseases burdens and the associated costs of treatment, as well as diversion of individual learners from school. It further highlights the costs of inadequate investments in WASH to justify increments for WASH financing. The total cost of inaction over 2026–2035 is projected at US\$ 27 billion (UGX 95 trillion), driven by disease burden, lost labor productivity, and reduced GDP growth.

The way forward requires the commitment of all stakeholders who are directly and/or indirectly involved and affected by WASH. Specifically,

there is need to increase the focus on sectors and institutions that involve large numbers of people like education, health, security agencies, public service, trade in closed and open spaces/markets as well as the multitude of households scattered in more than 71,000 villages across the country.

There is a need to significantly increase budget allocations to WASH to achieve national development goals. Despite an upward trend in allocations, funding remains far below the NDP annual requirement of UGX 5.1 trillion, expected to rise to UGX 10 trillion by 2030.

A 50% increase in WASH investment would reduce losses by US\$ 50 million per year, saving US\$ 2.5 billion by 2035. An 80% increase would save US\$ 3.2 billion by 2035 compared to the status quo, through reduced medical costs, increased productivity, and elimination of open defecation. Efforts are needed to increase public and private investment in WASH with focus on software and hardware investments communities, healthcare facilities, schools and public places. Sustained capacity-building interventions for government entities and local stakeholders are vital for effective WASH management.

6.1 RECOMMENDATIONS

1. Presidential and Political Leadership

The President should direct all MDAs to exclusively commit to and budget for WASH services to agreed national standards. Strong political will at the highest level is necessary to harmonize competing interests across power centers and ensure that WASH is treated as a cross-cutting national priority – not solely the domain of MWE, MoH, and MoES – given its direct bearing on health, education, gender, economic productivity, and national security.

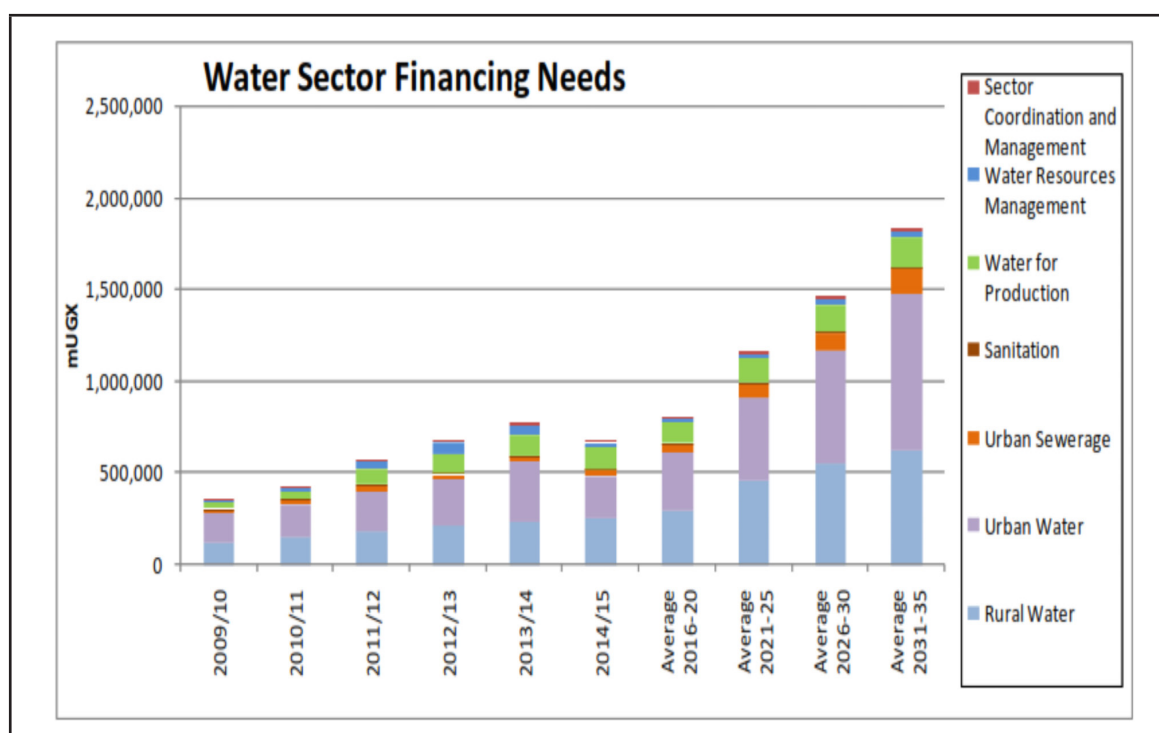
Responsibility: Office of the President; Cabinet; OPM; Parliament.

2. Develop a Comprehensive WASH Investment Financing Strategy

Uganda lacks a comprehensive strategy to guide all stakeholders on the nature and scale of WASH investments. The MWE has developed a financing strategy for the National Water Policy that identified the financing needs for WASH over the next decade

– 2026 to 2035. A detailed assessment of the gap between the current status and desired service levels is needed to inform the required financing. The strategy should leverage the evidence on the cost of inaction to secure commitments from government, the private sector, communities, CSOs, and development partners. It should also set clear, measurable targets for coverage, usage, quality, and equity, with timelines and accountability mechanisms linked to performance contracts or scorecards.

The preliminary indications are shown in Graph 6.1 below.

Graph. 6.1: Financing needs for Water Sector⁵¹

The projections indicate a growing need for both urban and rural water as well as sewage in the urban areas. The design of the financing strategy should adopt the lifecycle cost approach to ensure adequate provisions for both CAPEX and OPEX.

The component for water resource management needs adequate funding for studies by government, NGOs/CSOs and academia to generate evidence on utilization and results from WASH expenditure to inform decisions for improving effectiveness of planning and budgets.

There is however, need for the sector to develop a comprehensive financing strategy to cater for the other domains of Water, Sanitation and Hygiene in healthcare facilities, schools, and public places.

Responsibility: MoH; MWE, MoFPED; NPA; MoES; Development Partners.

3. Substantially Raise and Ringfence WASH Budget Allocations

Government budgets must reflect the scale of the challenge. For instance, the current budget allocation of 0.2% of the Ministry of Health total budget to environmental health is minimal to steer strategic WASH interventions in healthcare facilities. This allocation should be increased with committed funds ring-fenced for Water, Sanitation and Hygiene interventions in healthcare facilities. Substantial and structured annual increase in this

budget item in the Ministry of Health budget will support infrastructural development, capacity building and behavioral change interventions for improved WASH services in the healthcare facilities.

Additionally, a commitment to ringfencing 1.5% of the Non-Wage Recurrent (NWR) budget for MWE if would yield UGX 3.1 trillion over the next ten years (2026/27–2035/36). Allocations must not only support new infrastructure but also ensure long-term operations and maintenance, asset rehabilitation, and institutional capacity.

Responsibility: MoFPED; MWE; MOH, Parliament (Budget Committee); OPM.

4. Mobilize Blended and Diversified Financing

Public financing alone cannot fill the gap. Given disruptions to global development partnerships, Uganda must urgently diversify WASH financing sources. Innovative approaches should include performance-based grants, credit guarantees, microfinance for household sanitation, social impact bonds, public-private partnerships, and tax policy provisions. The sanitation economy offers real market opportunities, particularly for SMEs in waste management, sludge transport, fecal sludge treatment, and hygiene products.

⁵¹ MWE. 2023. Financing Strategy for the National Water Policy (2023) Draft Report

Responsibility: MoFPED; MWE; Private Sector Foundation Uganda (PSFU); Financial Institutions; Development Partners; MoTIC.

5. Strengthen Coordination, Multisectoral Planning, and Accountability

The Ministry of Health established a multi-sectoral coordination mechanism with leadership of the OPM for strengthening coordination, harmonize planning and budgeting for the WASH sector. This mechanism collaborates with all the line Ministries, Departments, Agencies, Development Partners and the Private sector.

This mechanism should be strengthened through development of national WASH strategy. This will streamline operations for steering the National WASH agenda. Particular attention should be given to the continuous engagement of the Parliament.

Responsibility: OPM; MoH, MWE; MoH; MoES; MoLG; Parliament (UPF-WASH); NGOs/CSOs.

6. Expand and Prioritize Investment in Underserved Areas and Populations

Investments must urgently address water supply (sources, treatment, storage, and maintenance), sanitation facilities (sex-segregated, disability-inclusive, with MHM provisions), and hygiene promotion. Priority should be given to underserved rural zones, informal urban settlements, remote health facilities and schools, and marginalized subregions such as Karamoja. Special attention must be accorded to gender-based needs, including menstrual hygiene management, safe privacy, and women's safety.

Responsibility: MWE; MoH; MoES; OPM KCCA; Development Partners, Local Governments; NGOs/CSOs.

7. Strengthen Local Government and Community Participation

Decentralized implementation must be matched with institutional capacity, technical support, and adequate incentives at district and municipal levels. Communities must be engaged from conception and budgeting through to oversight, to secure ownership and long-term sustainability of interventions. Participatory budgeting and citizen scorecards for WASH delivery should be scaled. Conditional grants to local governments must adequately reflect equity considerations, population served, geographical size, and the varying costs of CAPEX and O&M.

Responsibility: MoLG; MWE; OPM, Local Governments; Community and Cultural Organizations; NGOs/CSOs.

8. Build Human Resource and Institutional Capacity

A deliberate strategy is needed to increase human resource capabilities across all levels – construction, maintenance, financing, regulation, research and development, and media communication. Strengthened capacity will support the continued functionality of existing systems and generate new, appropriate WASH delivery of business models and financing mechanisms.

Responsibility: MWE; MoES; MoH; MoPS; Academic and Research Institutions; Private Sector

9. Scale Monitoring, Data Systems, and Adaptive Management

Analog and digital data collection and management systems should be integrated to track financing, implementation, and results across all WASH-related sectors. Monitoring should include community-level feedback loops, real-time GIS and mapping tools, and independent verification mechanisms. High-quality data must drive resource allocation and adaptive management. Uganda should also ensure timely and comprehensive reporting to the MoH/HMIS system, accounting for the estimated 30% of cases currently unreported through private facilities.

Responsibility: MWE; MoH; MoES; UBOS; NEMA; Local Governments; NGOs/CSOs

10. Foster Climate Resilience in WASH Infrastructure

Given climate variability, rapid population growth, and refugee influxes, WASH infrastructure must be climate-resilient, scalable, and future-ready. Strategies should include rainwater harvesting, decentralized systems, flood-resistant designs, groundwater protection, and redundancy in water supply networks. This is particularly critical in climate-vulnerable regions and refugee-hosting districts.

Responsibility: MWE; MOH, MOEs, NEMA; UNMA; OPM; Development Partners; Local Governments.

11. Invest in Behavior Change and Hygiene Education

National campaigns and community-level interventions should promote handwashing, safe sanitation habits, water treatment at the point of use, and proper facility of use and maintenance. Healthcare facilities, Schools and community groups should serve as sustained platforms for hygiene behavior change. Household-level behavioral change is equally critical to increasing adoption of good WASH practices and reducing the disease burden.

Responsibility: MoH; MoES; MWE; MoGL&SD; NGOs/CSOs; Cultural and Religious Institutions; Media.

12. Develop and Implement a Communication Strategy

An effective communication strategy should be developed to disseminate information on funding sources, implementation of progress, results, and

gaps to all stakeholders. Dissemination of evidence including findings from this report should target all actors, as it presents a new and compelling approach to WASH advocacy grounded in the economic cost of inaction.

Responsibility: MWE; MoH; MoES; OPM; NGOs/CSOs; Media; UPF-WASH.

ANNEXES

Annex 1: SDGs on Clean Water and Sanitation

- 1) By 2030, achieve access to adequate and equitable sanitation and hygiene for all and end open defecation, paying special attention to the needs of women and girls and those in vulnerable situations
- 2) By 2030, improve water quality by reducing pollution, eliminating dumping and minimizing release of hazardous chemicals and materials, halving the proportion of untreated waste water and substantially increasing recycling and safe reuse globally
- 3) By 2030, substantially increase water-use efficiency across all sectors and ensure sustainable withdrawals and supply of freshwater to address water scarcity and substantially reduce the number of people suffering from water scarcity
- 4) By 2030, implement integrated water resources management at all levels, including through trans-boundary cooperation as appropriate
- 5) By 2020, protect and restore water-related ecosystems, including mountains, forests, wetlands, rivers, aquifers and lakes
- 6) By 2030, expand international cooperation and capacity-building support to developing countries in water- and sanitation-related activities and programmes, including water harvesting, desalination, water efficiency, wastewater treatment, recycling and reuse technologies
- 7) Support and strengthen the participation of local communities in improving water and sanitation management

Annexure 2: Estimation of Unit costs for Selected Water-borne Diseases General considerations

The cost of treating diseases in Uganda varies by kind of medication, type of HCF, whether the person is handled as an in/outpatient, and other direct and indirect costs⁵². The direct costs are mostly medical while, and indirect costs include Out-Of-Pocket (OOP) including feeding and transportation among other logistics. Additional costs are related to the

roles of caregivers' costs related to productivity/time loss, income, food, travel costs, and other household characteristics. Furthermore, the cost is influenced by severity of the disease that might be mild or significant and requiring hospitalization and geographical location. Mild cases are less expensive as they are mostly treated as outpatients. Public or government facilities generally have lower direct treatment costs compared to private clinics and hospitals.

Unit Costs for Treating Diarrhea

The report relied on literature that used the approach of incidence-based cost-of-illness to capture monthly healthcare facility data on staff, medications, capital costs, and hospital-related expenditures for childhood diarrhea patients in Uganda. The authors interviewed caregivers at healthcare facilities in the public and private (for-profit and not-for-profit) sectors. They also conducted phone interviews with caregivers 7-14 days post-discharge to capture additional out-of-pocket expenses and associated costs. In addition, they captured caregiver costs related to productivity/time loss, income, food, travel costs, and other household characteristics. Finally, the costs were aggregated into direct (medical and non-medical) and indirect costs and then estimated by age, gender, type of care (outpatient, inpatient), type of facility, and wealth quintile.

The results indicated averages of direct medical costs for an outpatient episode of US\$ 15.8 (UGX 56,000) and inpatient care of US\$ 28.3 (UGX 99,050). These costs are likely to be higher when one factors in out-of-pocket (OOP) costs of logistics and food that households incur as well as social costs of not working due to ill health. The total costs (including non-medical and indirect costs) are estimated at US\$ 29.2 (UGX 103,660) per episode of diarrhea.

Unit Costs for Treating Dysentery

The literature on treating dysentery in Uganda is not readily available but searches including web-based sources provided average estimates for outpatient in a public facility of US\$ 7.0 and US\$ 23 for a hospitalized patient. Private sector facilities charge more by about 20% based on assessments from interviews with selected Key Informants. Additional information was sourced from caregivers to cater for societal perspectives on economic cost.

⁵² Anthony Ssebagereka, Makerere University School of Public Health. Gatien de Broucker, Johns Hopkins Bloomberg School of Public Health. Aloysius Mutebi, Makerere University School of Public Health. Elizabeth Ekirapa Kiracho, Makerere University School of Public Health. Bryan Patenaude Johns Hopkins Bloomberg School of Public Health. Dagna Constenla, GlaxoSmithKline Plc
Posted Date: June 21st, 2023. DOI: <https://doi.org/10.21203/rs.3.rs-3001670/v1>

Unit Costs for Treating Typhoid

The incidences of typhoid fever in Uganda are driven by factors that include lack of knowledge on its mode of transmission, failure to complete treatment for previous episodes, mismanagement of wastes and food, and failure to boil water for drinking. Others are lack of latrines, distant HFCs that might not be duly equipped with the basic laboratory equipment for routine typhoid testing and diagnosis, and gaps in the general examination of patients⁵³.

The reviews of literature indicated a range of costs based on factors described above that include location, type of treatment, and nature of HCF. A study in Kabale district found the average cost of treating typhoid was about US \$54.74 while an outbreak of the disease in Kampala cost the government an estimated US\$1.3 million (UGX 4 billion). Overall, the average cost of treating typhoid was estimated at US \$75.62 for inpatient care and US\$33.85 outpatient care.

Unit Costs for Treating Cholera

The MoH conducts surveillance for identification and recommendation of control activities in case of cholera outbreaks. The process includes reporting the cases based on a standardized clinical definition and systematic laboratory testing of stool samples. This used data from the MoH/HMIS system for the period of 2020-2024 that is on confirmed cases of cholera.

The review of studies in the country provided working parameters for the estimation of average unit costs. For example, the costs of investigations and controlling a single outbreak in Hoima including establishment of a treatment center, were estimated at US\$ 71,769⁵⁴. This included direct costs of US\$ 21,059 (US\$ 19,225 for allowances and transportation, US\$ 1,774 for medical equipment and supplies, and US\$ 60 for utilities). The balance of US\$ 50,620 was 74,484 person-hours in the form of compensation for responders and salaries. Individual costs averaged to US\$ 20 per night for inpatient care while the household's average cost for a cholera episode was US\$3 3.94, of which close to 50% was a direct cost. Health facilities spent an average of \$82.65 to treat a single cholera case.

Annexure 3: The Key Investment Areas

The report has shown a need for additional funding for investments for communities, healthcare facilities, schools and public places in the following areas:

1. Water supply to cover installations for improved sources, rainwater harvesting, treatment and storage, as well as regular cleaning and disinfection of water sources and dispensers.
2. Sanitation facilities including construction of new latrine blocks to meet the required user-to-stance ratios that are sex-segregated and accessible for persons with disabilities, routine maintenance, waste disposal. Infrastructural investments include; incinerators for healthcare waste management, landfills for municipal waste management in urban areas, and dedicated rooms and supplies for Menstrual Health and Hygiene (MHH).
3. Hygiene promotion to cover for handwashing facilities with soap at critical points, such as near latrines and food premises, materials, and activities to promote hygiene awareness and behavior change among communities, as well as inspection and monitoring to ensure appropriate enforcement.
4. Planning that includes needs assessments, designs of projects and budgets, implementation and monitoring for desired results.

6.2 Preconditions for Increased WASH funding

All stakeholders, especially those in key decision-making positions must recognize that universal access to WASH is an essential component of an integrated approach to tackling poverty, hunger, ill-health, inequality, wealth creation and growth of the economy. The messages being used in advocacy initiatives should ensure general appreciation of the broader WASH agenda, including the implications of "no action" to increasing the budgets for WASH to sufficient levels.

The following are some of the critical preconditions for increasing WASH budgets.

1. The different stakeholders must appreciate their roles and responsibilities on the complex maze of WASH, which must not be seen as a responsibility of a few sectors – mainly MWE, MoH, MoES, and LGs. Strengthening coordination among various government ministries, local governments, NGOs/CSOs, and international partners is key to effective WASH service delivery.

⁵³ James Kasadhaa, I, Stephen Oketcho. Factors Contributing to increased Cases of Typhoid Fever among patients aged 18-45 Years in Kakira Health Centre III, Jinja District. A Descriptive Study. www.sjhresearchafrica.org

⁵⁴ E.A. Okullo B.-P. Zhu. Volume 53, Supplement 13th December 2016 [https://www.ijidonline.com/article/S1201-9712\(16\)31555-7/fulltext](https://www.ijidonline.com/article/S1201-9712(16)31555-7/fulltext)

2. There should be strong political commitment to development of sustainable and resilient WASH systems, which includes addressing concerns on Climate change. The politicians within the executive and the legislature have a significant role to play in the setting and execution of the WASH agenda through influencing policies, planning, budget allocations, and implementation mechanisms for the sector.
3. The oversight function by the Parliament and other parties across the private sector and NGOs/CBOs are crucial for the realization of the overarching goal of universal access to effective and sustainable WASH services.
4. The agenda for increased financing for WASH should not only consider public sector actors but the private sector as well. There should be increased engagement of the various aspects of the private sector in areas of producing WASH services as well as their consumption.
5. Uganda should have a deliberate policy and strategy for increasing the stock of human resources for the production and management of all aspects of WASH services. These include engineers and artisans for the construction and maintenance of WASH projects, financiers, regulators, and media to communicate with different parties.
6. Research, Innovations and Development (RID) for continued improvement of all aspects along the various WASH value chains. For example, there are emerging ways of faecal sludge management that make it a commercial venture able to attract and generate new resources for the sector.
7. The development of different WASH delivery business models and how best to finance and operationalize them in a resilient and sustainable way. This includes identification of the most efficient ways to deliver WASH in different circumstances. WASH delivery mechanism in densely populated cities cannot be the same as in villages, slums, and in low land and high land areas.
8. Data collection, storage and management require specific investments including digital systems for collection and analysis of the data. The systems for tracking finances, implementation and results are critical for continued improvement of the WASH services.
9. Development of a clear and effective communication strategy involving generation and packaging of content that is relevant to different audiences.

6.3 The future of WASH requires more funding

The WASH sector often suffers from insufficient funding and under-prioritization, which hinders efforts to meet the set targets and goals. The overarching challenges increasing investments and maintenance of the WASH services infrastructure and ensuring long-term government commitment need to be resolved continuously to sustain efforts for achieving sustainable WASH access. Addressing the various challenges requires comprehensive interventions, including water assistance in communities, WASH assistance in schools, and hygiene assistance for vulnerable households. The estimates for the necessary investments have been indicated in Graph 6.1 above that was developed by the MWE and partners.

6.4 Sources of Funds

Creative approaches are needed to identify the various sources and types of funding for the provision of WASH services. The sources must be from within the public and private sector as well as DPs and NGOs. The households, communities and related groups should be mobilized to prioritize WASH since for many of them the challenge is not inability but rather unwillingness to pay.

The rest of this subsection provides proposals for additional analysis and discussions among the relevant stakeholders in the country.

6.4.1 Behavioral change to emphasize adoption of good usage

The mode of financing involving avoidance of unnecessary expenditure is a critical aspect that can be realized through behavioral change for better adoption and usage of the right WASH services. Behavioral change will reduce diseases of infections and related costs of morbidity and mortality. The MoH has, for example, been implementing the National Open Defecation Free and Accelerated Basic Sanitation Roadmap (2021-2025) that is aimed at combating the public health consequences of open defecation, which include child mortality, morbidity, malnutrition, and stunting, with long-term effects on cognitive development. In addition, several CSOs have used the Community-Led Total Sanitation (CLTS) approach, which educates communities on the health risks associated with open defecation and poor personal hygiene, to address this issue.

6.4.2 Increasing funds from Non-wage recurrent budgets

A portion of the NWR budget in each sector should be ring-fenced to raise and secure additional financing to WASH. Since there is a component of WASH that is already within these NWR budgets, it is

recommended that 1.5% of the total budget for NWR be ringfenced for WASH. Using historical budgets, the proposal would have raised UGX 1,217.78 billion

over the 10-year period between FY 2015/16 and FY 2024/25. (See Table 6.1).

Table 6.1: Analysis of the Wage and Non-wage budgets for FY 2015/16 – FY 2024/25

FY	Wage	Non-Wage	Wage/Non-Wage (%)	1.5% of Non-Wage
2015/16	2,894.66	4,106.40	70.5	61.60
2016/17	3,359.04	4,204.76	79.9	63.07
2017/18	3,575.95	4,441.34	80.5	66.62
2018/19	4,311.79	5,495.41	78.5	82.43
2019/20	4,760.37	7,695.21	61.9	115.43
2020/21	5,100.88	8,953.92	57.0	134.31
2021/22	5,533.06	8,740.76	63.3	131.11
2022/23	6,375.58	11,169.58	57.1	167.54
2023/24	7,284.47	12,013.40	60.6	180.20
2024/25	7,929.25	14,364.36	55.2	215.47
Total budget equivalent to 1.5% of the Total Non-Wage				1,217.78

Source: MFPED MTEF Data

If NWR continued to grow at the same rate of the past 10 years, for the next decade, from FY 2026/26 to FY 2035/36 (Fig. 6.1), the potential total additional revenue for WASH would be UGX 3,068.3 billion, with the annual increases as indicated. Guidelines should be issued to ringfence the resource to finance the re-current aspects of WASH that are currently underfunded. The trends are indicated in Graph 6.2 below.

6.4.3 Tax policy provisions

Amendments to tax policies to allow for specific waivers to certain activities in production of WASH materials, implementation of projects, and consumption. These non-cash-based approaches will increase real budgets for different actors. Lowering the tax rate applied on water consumption provided by the corporate providers can reduce the costs of accessing WASH services for many households. Tax relief through exemptions can provide implied additional finances to the WASH sector. The policy can be selectively applied to target users in the low-income category or those with bad WASH usage indicators.

Incentives for the Private sector players

6.5 Development of a WASH Investment Financing Strategy

Uganda lacks a comprehensive WASH strategy that guides all stakeholders supposed to make decisions on the nature of required investments and this mode of financing. Decisions to invest in WASH are scattered across the public and private sector with no single guiding framework to ensure consistency, comprehensiveness and adherence to a given standard. While sectors such as education and health have evolved and made efforts to enforce standards for WASH, knowledge about standards and enforcement in almost all other sectors is lagging. Large Shopping malls, Markets and Office premises in urban areas have restricted access to resident users and hardly any access to clients/customers, several banking halls do not have provisions for clients, highways have no official provisions for WASH facilities and low-income communities in urban areas (slums) and rural areas lack the required facilities.

The required investments are not only physical structures, hardware, but also software aspects. The latter include behavioral change; systems for the management and accountability of finances; and continuous sensitization, monitoring, evaluation, and incorporation of lessons learned into subsequent strategies. The households and communities

need to prioritize WASH by overcoming two critical challenges of inability and unwillingness to pay.

It is within the above context that the report recommends a detailed comprehensive assessment to establish the gap between the status and the desired quantity and quality of services to inform the magnitude and scope of the required financing. The strategy to raise the required financing should leverage the evidence provided in this report on “the cost of inaction” to achieve the following two aspects at the minimum:

1. The decision to increase financing for the provision of adequate WASH services on a sustainable basis. To be sustainable, the strategy should cover the short-, medium- and long-term with a clear view of the projections on population growth and settlements patterns.
2. Commitment by all stakeholders in government, private sector, communities, CSOs and DPs to find the required resources. This will involve approaches to identify the various sources and types of funding. The public sector should consider amendments to tax policies to allow for specific waivers to certain activities in production and consumption of WASH materials. For example, reducing the tax rate applied on water consumption provided by corporate providers can reduce the costs of accessing WASH services by households. These non-cash-based approaches will increase real budgets for different actors.

REFERENCES

- Bunini, M. D. 2017. Comparative Analysis of Sources of Growth in Tanzania, Uganda and Kenya: A Growth Accounting Approach. Turin School of Development Working Paper No. 5. International Training Centre of the ILO, Turin, Italy
- Hennegan J, Dolan C, Wu M, et al. (2016) "Measuring the prevalence and impact of poor menstrual hygiene management: a quantitative survey of schoolgirls in rural Uganda". BMJ Open 2016.
- Hennegan J, Hasan MT, Jalil T et al (2019) The Menstrual Practice Needs Scale Short Form (MPNS-SF) and Rapid (MPNS-R): Development in Khulna, Bangladesh, and validation in cross-sectional surveys from Bangladesh and Uganda.
- Kawuki, J, Musa, T, H, and Ongecu P., 2020. Dietary practices, WASH conditions, and disease occurrence among children below five years in households of Nangabo, Wakiso district, Uganda. Scientific African Vol. 7
- MoES, 2020. National Micro Planning Handbook for Water, Sanitation and Hygiene (WASH) in Public Primary and Secondary Schools in Uganda.
- MoES, 2025. The Education Statistics Abstract (Provisional Report)
- MoH (2022), National Micro Planning Handbook for Water, Sanitation and Hygiene (WASH) in Healthcare Facilities (HCFs) In Uganda
- Mulindwa. J, Namulondo. J, Kitibwa. A, Nassuuna. J, Nyangiri. O.A, Magambo. Phillip. K, Boobo., Nerima. B, Busingye. F, Candia. R, Namukuta. A, Ssenyonga. R, and Ukumu. N (2022). High prevalence of *Schistosoma mansoni* infection and stunting among school age children in communities along the Albert-Nile, Northern Uganda: A cross sectional study. Available at: <https://doi.org/10.1371/journal.pntd.0010570>
- MWE, 2020. Uganda Water and Environment Sector Performance Report 2020
- Ntaro, M. J. Owokuhaisa, J.B. Isunju et al. (2022) "Contextual and psychological factors influencing open defecation free status: an exploratory qualitative study in rural Southwestern Uganda". BMC Public Health (2022) 22:414.
- UBOS (2021), National Service Delivery Survey 2021 Report. Uganda Bureau of Statistics. Kampala Uganda
- UBoS, 2024. National Population and Housing Census
- UNICEF (2023) Investing in the WASH Sector in the FY 2023/24
- WHO (2020) Global Progress Report on Water, Sanitation and Hygiene in Health Care Facilities: Fundamentals first. Geneva: World Health Organization; 2020.
- WHO (2023) Burden of disease attributable to unsafe drinking-water, sanitation, and hygiene, 2019 update. Geneva: World Health Organization; 2023.
- WHO/UNICEF JMP for WASH (2024) Progress on drinking Water, Sanitation, and Hygiene in Schools 2015-2023: Special focus on Menstrual Health.



