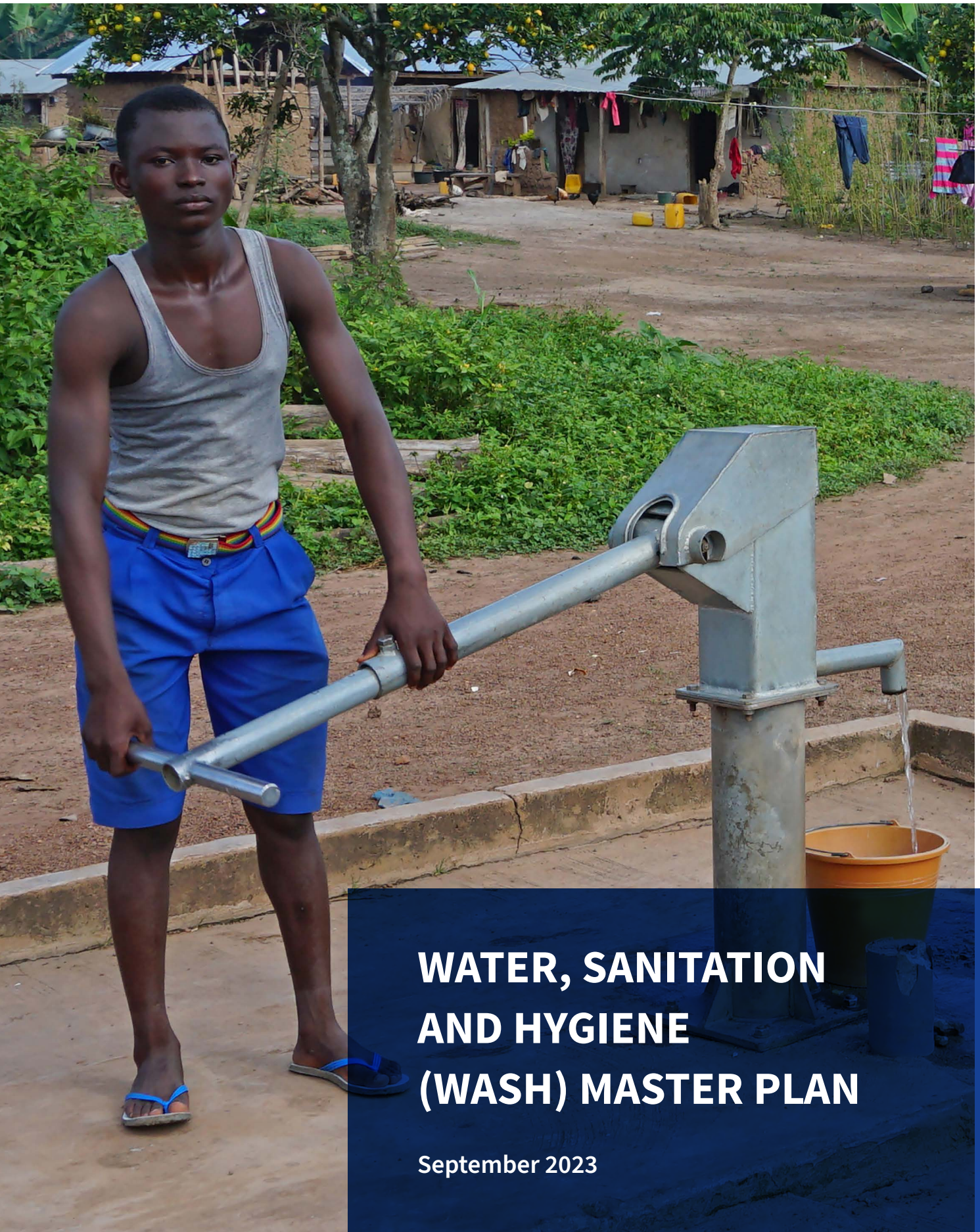


ASUNAFO SOUTH DISTRICT ASSEMBLY

Asunafo South Nsupa ne Ahotee Nkosoɔ (ASNAN Initiative)
AHAFO REGION



WATER, SANITATION AND HYGIENE (WASH) MASTER PLAN

September 2023

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WATER, SANITATION AND HYGIENE (WASH) MASTER PLAN

Asunafo South District Assembly
September 2023



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ACRONYMS AND ABBREVIATIONS

ANAM	Asutifi North Ahonidie Mpontuo
ASDA	Asunafo South District Assembly
BM	Benchmark
CHAG	Christian Health Association of Ghana
CHOs	Community Health Officers
CHPS	Community Health Planning and Services
CRADA	Child Research for Action and Development
CWSA	Community Water and Sanitation Agency
DACF	District Assemblies Common Fund
DDF	District Development Facility
DESSAP	District Environmental Sanitation Strategy and Action Plan
DHD	District Health Directorate
DPP	Dual Path Platform
EHSd	Environmental Health and Sanitation Directorate
ESP	Environmental Sanitation Policy
GES	Ghana Education Service
GHS	Ghana Health Service
GWCL	Ghana Water Company Limited
G2D	Grade 2 Disabilities
HCF	Health Care Facility
JMP	Joint Monitoring Programme report
MDTP	Medium-Term Development Plan
MMDAs	Metropolitan, Municipal and District Assemblies
MSWR	Ministry of Sanitation and Water Resources
MB	Multibacillary
NDPC	National Development Planning Commission
NMTDPF	National Medium-Term Development Policy Framework
NTDs	Neglected Tropical Diseases
NTDP	Neglected Tropical Diseases Programme
NWP	National Water Policy
OPD	Outpatient Department
PCR	Polymerase Chain Reaction
PHC	Population and Housing Census
RDT	Rapid Diagnostic Testing
SHEP	School Health Education Programme
SDGs	Sustainable Development Goals
SMAid	Sustainable Mission Aid
WRC	Water Resources Commission
WSMT	Water and Sanitation Management Team
WASH	Water, Sanitation, and Hygiene
WHO	World Health Organization

ACKNOWLEDGEMENT

The Asunafo South District Assembly wishes to express our profound gratitude to the Ahafo Regional Coordinating Council with special mention to the Regional Minister, Hon. George Yaw Boakye for the leadership and key role he played in convincing IRC Ghana and our development partners to expand the ANAM WASH initiative to three additional districts. We also appreciate the critical roles of the offices of the Regional Coordinating Director, the Regional Economic Planning Officer, and the Regional Environmental Health Officer in attaining these results.

Our heartfelt appreciation goes to IRC Ghana for the enormous guidance, technical and financial support and confidence reposed in us to deliver. The outstanding Mrs. Vida Duti has been an inspiration throughout the process, and we really appreciate her support. Also thanks to the Water and Sanitation expert, Mr. Jeremiah Atengdem for your rich expertise and useful feedback that helped in improving the structure and content of the plan. We will keep counting on you as we enter the operational phase of the initiative.

The Master Plan would not have been wholesome without the inputs of our cherished development partners. We are grateful to World Vision, Safe Water Network, Aquaya Institute, Project Maji, Saha Global, and Community Water and Sanitation Agency for your dedication. We know that your commitment to the task will encourage many more partners to enrol so we can achieve the goal together.

We were overwhelmed by the massive buy-in from our local NGOs, Private Sector, Women and Youth Associations, Faith-Based Organisations and the entire populace of the Asunafo South District during the plan preparation. This show of support gives us confidence that the plan implementation will be effective and successful in the end. We appreciate you and we look forward to a fruitful engagement during the implementation stage.

Finally, to the two Paramount chiefs of our beloved district, Kukuom and Sankore and all divisional and sub chiefs, we say a big thank you for the spirited representation you put up throughout the workshops. Your dedication to this course was indeed the driving force that rallied all other civil and social groups in Asunafo South to partake and contribute to raising this formidable plan.

Our commitment and dedication towards the coming into being of this very critical development initiative confirms that we have all it takes to change the Water, Sanitation and Hygiene narrative of the Asunafo South District. May the good Lord bless and keep us strong and alive to witness this great transformation.



Photo: National and local level stakeholders welcome regional replication of the district-wide initiative

PREFACE

The Asunafo South District's Water, Sanitation and Hygiene (WASH) Master Plan dubbed, the Asunafo South Nsupa ne Ahotee Nkosoo (ASNAN), is a framework that will guide the implementation of WASH services in the district in the next eight (8) years. It is informed by guidelines of the National Development Planning Commission of Ghana and framed within the targets of United Nations' Sustainable Development Goal 6. The master plan provides a framework for coordinating and aligning efforts of all actors towards achieving the stated vision of establishing a district where every person in households, health and educational institutions have access to safe and sustainable water, sanitation and hygiene services by 2030.

The district's current WASH situation reveals that 70% of the total population have access to safe and sustainable water and only 23.2% have access to safely managed sanitation facilities. This, in our view, is woefully inadequate for a district that is committed to the objectives of improving access to safe and reliable water supply and enhancing access to improved and reliable environmental sanitation for all by 2030. The master plan therefore seeks to address this gap by providing realistic strategies and targets with timelines that will ensure consistent and timely implementation.

The process of developing the plan was participatory. It involved stakeholders at local, regional and national levels. The National Development Planning Commission, IRC, Safe Water Network, World Vision International, Community Water and Sanitation Agency, chiefs, and the Asunafo South District Assembly played various roles in preparing the document.

The plan will seek to increase the proportion of population with access to safe and sustainable water from 70% to 100% by 2030 and improve access to safely managed sanitation from 20% to 97% by 2030. There is a conscious effort to penetrate hard-to-reach communities to ensure that even without the use of drilling machines, available surface water sources are treated and manually tapped for safe consumption.

As we implement this master plan, we will ensure and build strong partnerships through effective coordination between all key stakeholders to achieve an efficient WASH system that will last from generation to generation.

On behalf of the people of Asunafo South, we wish to express our sincere appreciation to IRC Ghana, the Regional Coordinating Council, and all development partners and civil society organisations who contributed in diverse ways towards the development of this master plan. It is our fervent hope that going forward, with commitment and hard work, the juicy provisions of this master plan will be manifested in reality for the service of the Asunafo South District.

'Nsupa ne Ahotee de apomuden ne nkosoo ba'



HON. FRANK ADUSE POKU
DISTRICT CHIEF EXECUTIVE
ASUNAFO SOUTH DISTRICT ASSEMBLY

EXECUTIVE SUMMARY

The provision of safe water, sanitation, and hygiene (WASH) services is generally considered essential to improving people's quality of life, socio-economic development and public health outcomes.

Ghana has an enormous endowment of water resources which provide for the necessities of life and socio-economic development. However, despite improvements in access to water services, many people do not enjoy safe, reliable, and affordable water services. A significant number of the population also do not have access to improved sanitation, especially in rural communities.

The Asunafo South District Assembly and its major development partners and stakeholders developed this 7-year (2023-2030) WASH master plan termed the Asunafo South Ahonidie Mpontuo Initiative (ASNAN Initiative). The Asunafo South District is among the six (6) districts within the newly created Ahafo Region. It has total population of 91,693 (2021 PHC), with Kukuom as the District Capital.

The WASH master plan is informed by guidelines of the National Development Planning Commission of Ghana and framed within the targets of United Nations' Sustainable Development Goal 6. The master plan provides a framework for coordinating and aligning efforts of all actors towards achieving the stated goal and vision for WASH in the District.

The process of developing the plan was participatory. It involved stakeholders at local, regional and national levels. The National Development Planning Commission, IRC, Safe Water Network, World Vision International, Community Water and Sanitation Agency, chiefs, and the Asunafo South District Assembly played various roles in preparing the document. The plan preparation process was completed within a year (January to December 2022).



Photo: Forging partnerships for master plan implementation

The ASNAN WASH master plan initiative seeks to promote universal access to safe water, basic sanitation and hygiene services by 2030. The water service target is to increase the proportion of the population with access to safely managed water sources from 8% in 2022 to 17% by 2030. In addition, increase access to at least basic water services from 62% in 2022 to 83% by the end of 2030, and reduce the unserved population from 23% to 0% between 2022 and 2030. The sanitation target includes increasing the proportion of households in the district with access to safely managed sanitation from 36% in 2022 to 100% by 2030. Eliminate open defecation by 2026 and the use of unimproved sanitation facilities by 2030.

The strategic directions to guide the ASNAN WASH master plan initiative are summarised as ‘SAFE’: (i) Strengthening enabling environment and capacity, (ii) Accountability and enforcement promotion, (iii) Facility and service coverage expansion and (iv) Enhancing partnerships to leverage resources. An overview of the ASNAN strategic framework is presented below.

The infrastructure and recurrent costs required to provide universal access to WASH services in the district is estimated at US\$ 20.6M, comprising US\$ 7.4M for universal sustainable water services and US\$ 13.2M for sanitation. The estimated costs exclude the investment required for WASH in schools and health care facilities. The investment required for strengthening local and district level systems related to the strategic directions on Strengthening the enabling environment and capacity for WASH, Accountability and Enforcement promotion, and Enhancing Partnerships to leverage resources are not covered in the cost projections.

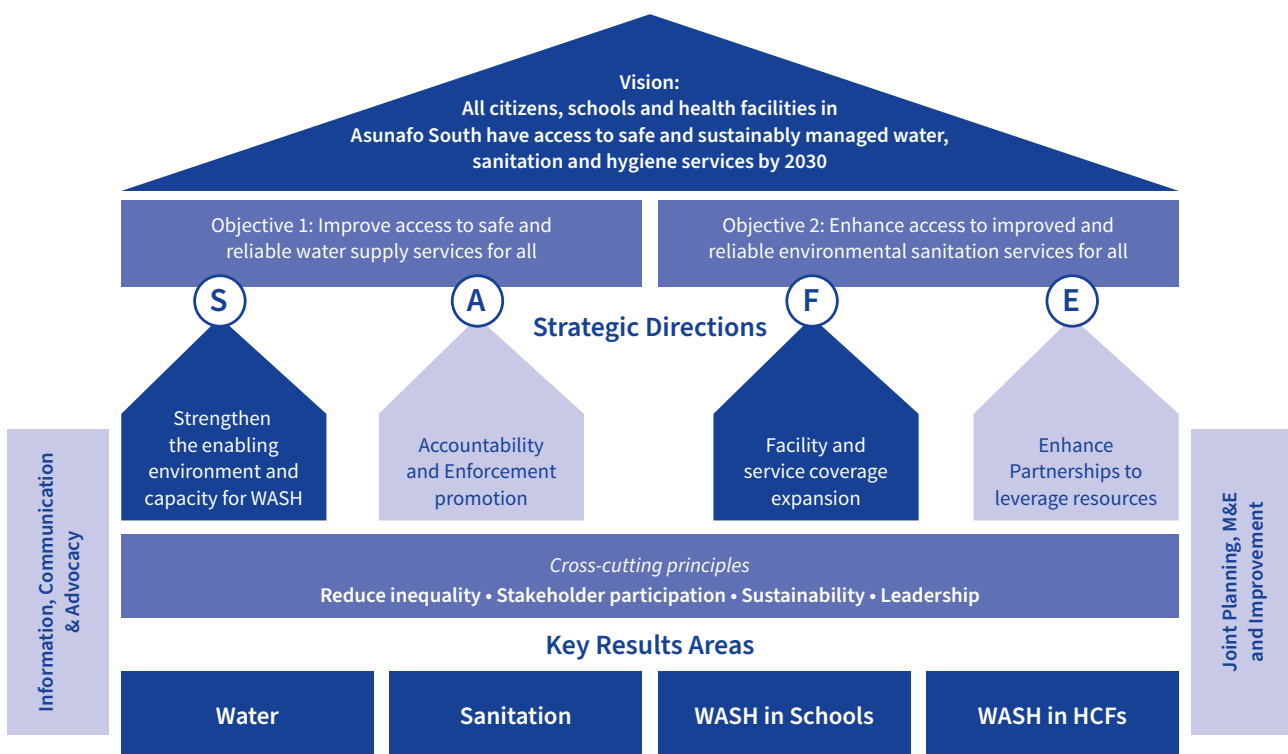


Figure 1 Strategic framework for the ASNAN initiative

1 INTRODUCTION TO THE WASH MASTER PLAN

1.1 INTRODUCTION

Access to safe water, sanitation and hygiene is the most basic human need for health and well-being. (United Nations¹)

Globally, it has been acknowledged that the provision of safe water, sanitation, and hygiene (WASH) is fundamental to improving people's quality of life, socio-economic development and public health outcomes. Mobilising relevant stakeholders to collaborate to achieve pertinent WASH targets, such as the applicable Sustainable Development Goals (SDGs), within an integrated framework is essential to enhancing well-being.

The Asunafo South District Assembly and its major development partners and stakeholders developed this 7-year (2023-2030) WASH master plan termed the Asunafo South Ahonidie Mpontuo Initiative (ASNAN Initiative).

The ASNAN initiative was inspired by the Asutifi North District Assembly's innovative 13-year ANAM WASH master plan initiative (2017–2030), implemented in partnership with IRC and other Conrad N. Hilton Foundation grantees. The ANAM WASH master plan initiative made significant progress and received a favourable midterm evaluation. The ANAM initiative's substantial strides and positive reviews served as the impetus for replicating the WASH master plan initiative in three other districts in the Ahafo region, including Asunafo South.

1.2 RATIONALE

This WASH master plan presents the broad vision, programmes, and strategies jointly developed, negotiated, and owned by the WASH stakeholders in Asunafo South, including the District Assembly, traditional authority, private sector entities, service providers, service users, the Ahafo Regional Coordinating Council, and development partners such as IRC, among others.

The WASH master plan provides an integrated approach for the provision of WASH services within the Asunafo South District. The master plan serves as a result-oriented tool for local government actors, communities, development partners and other relevant stakeholders to harmonise, mobilise and contextualise their efforts towards achieving the relevant sustainable development goals (SDGs) and national targets in their operational areas. As WASH stakeholders collaborate and create synergy to realise a shared vision of universal access to safe water, sanitation, and hygiene services, the master plan will improve effectiveness and efficiency in the use of resources by minimising duplication of efforts and working at cross purposes.

The overarching goal of the ASNAN initiative is to enhance the overall quality of life of the people. Through the ASNAN initiative, the Asunafo South District Assembly and stakeholders envision that “By 2030, every person in households, health and educational institutions in Asunafo South will have access to safe and sustainable water, sanitation and hygiene services”. The 7-year master plan serves as a blueprint to guide and improve planning, coordination, costing, resource mobilisation, comprehensive tracking of WASH sector performance and results.

¹ <https://www.un.org/sustainabledevelopment/water-and-sanitation>

1.3 PROCESS OF DEVELOPING THE MASTER PLAN

Developing the master plan took close to five (5) months, from August to December 2022. The process can be characterised as multi-stakeholder, participatory and multi-stage, starting with district inception workshops, then data collection, and strategic planning workshops, rapid network assessments and validation meetings. Relevant stakeholders from the local, regional and national levels actively participated in the process. The main stages of the master plan development process are outlined below.

1.3.1 INCEPTION AND LAUNCH WORKSHOP

An inception workshop was organised and facilitated by IRC in July 2022 which brought together stakeholders from government, private sector, service providers, private operators, development partners, service users, and traditional authorities, among others, from the WASH sector in- and outside the district. IRC, Safe Water Network, all three selected municipal and districts assemblies, chiefs and traditional authorities participated. Key stakeholders welcomed the initiative, pledged to cooperate with the consortium partners and participate actively in developing the master plan and its implementation.

1.3.2 SERVICE MONITORING AND DATA COLLECTION

In September 2022, data was collected from all handpumps, solar pumps, limited mechanised boreholes and small town piped schemes in the district. This data covered the status of the assets, functionality and water services, their management, and the performance of service providers. In addition, data was collected on access to water and sanitation services from a representative sample of 300 households. Also, data was collected on WASH services in schools and health care facilities. An adapted version of the CWSA's data collection forms was used by district-based staff to gather data. Mobile phone technology (mWater) was used for data collection.

1.3.3 STRATEGIC PLANNING WORKSHOP

The strategic planning workshop was held at Goaso from October 26 to 28, 2022. The workshop discussed the needs, vision, defined outcomes, strategies, implementation arrangements and funding mechanisms to achieving full WASH coverage. The forum provided a common platform for discussing the challenges and opportunities of attaining full WASH coverage in the district by 2030. The discussions were informed by the service monitoring data and contextual analysis reports, forming the basis for the master plan. The workshop covered three districts: Asunafo South, Asunafo North, and Tano North. Officials from the Asutifi North District Assembly also participated to share their ANAM experience and lessons.

About 45 participants from government, including representatives from selected Municipal and District Assembly departments, the Ahafo Regional Coordinating Council, the Ministry of Sanitation and Water Resources, CWSA, WRC, and the National Development Planning Commission (NDPC), attended the workshops. In addition, traditional authorities, private sector actors, development partners, CSOs and NGOs also participated.

1.3.4 RAPID NETWORK ASSESSMENT

In February 2023, Netcentric Campaigns, together with IRC conducted a rapid network assessment exercise in the district. The goal of the exercise was to understand the structures required for building a people-centred WASH network and the opportunities for creating strong connections among technocrats, traditional authorities, and communities to enhance the success and sustainability of the WASH initiative. The WASH network will also advance communication by identifying and building on channels that people can use to raise issues, make complaints, or learn about WASH. This rapid network assessment exercise ended with a validation workshop with participants from the Ahafo Regional Coordinating Council, as well as the Asunafo South, Asutifi North, Tano North municipalities in attendance.

1.4 NATIONAL OVERVIEW OF WATER, SANITATION, AND HYGIENE

Ghana's population, which currently stands at approximately 30.8 million, is rapidly urbanising (Ghana Statistical Service, 2021). In 2009, the urban population reached 50% for the first time, and by 2016, it had increased to over 54%. By 2030, a projected 63% of an estimated population of 37.8 million will reside in urban areas. By implication, the demand for water and sanitation services is estimated to rise rapidly, particularly in urban areas.

The Government of Ghana aims to make sustainable water, sanitation and hygiene services universally accessible by 2030 and to manage water resources sustainably for multiple purposes. Hence, the Ministry of Sanitation and Water Resources was established in 2017 to provide policy direction, coordinate, monitor, and evaluate the performance of the sanitation and water subsectors in achieving the government's ambitious targets.

Water service coverage is relatively high at the national level, as shown in Figure 2 below. However, a considerable part of the population, especially in rural areas, continues to depend on surface water, unimproved sources, or sources that are more than a 30-minute round trip away (limited water services).

A significant proportion of the population also lacks access to improved, unshared (at least basic) sanitation, as illustrated in Figure 2 below. Open defecation is a major issue, especially in rural communities. A significant amount of liquid waste is improperly disposed of, endangering human health and the environment. The poor WASH service delivery is also impacted by inadequate financing and weak regulatory enforcement.

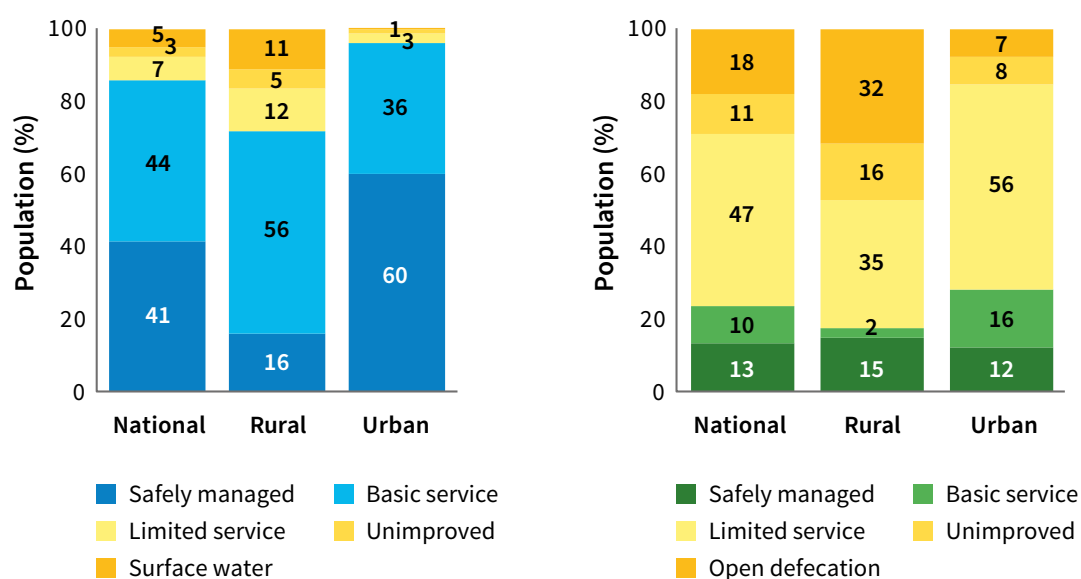


Figure 2 JMP 2020 water (left) and sanitation (right) service ladder
Source: WHO/UNICEF JMP (2021)

1.4.1 NATIONAL COMMITMENT

Government is enjoined to ensure that the national economy is managed efficiently to maximise the welfare of the citizenry (as stipulated in Article 36, Clause 1 of Ghana's 1992 Constitution). To this end, the National Development Planning Commission (NDPC), through the National Medium-Term Development Policy Framework (NMTDPF) (2022-2025), guides the preparation of sector and district development plans to ensure the achievement of both regional and national development goals and objectives.

Ghana's WASH sector plan envisions "**sustainable water and basic sanitation for all by 2025**". This national vision requires that "*all people living in Ghana have access to adequate, safe, affordable and reliable water services, practise safe sanitation and hygiene and that water resources are sustainably managed.*" The goal is "**to contribute to improvement in the living standards of Ghanaians through increased access to and use of safe water, sanitation and hygiene and sustainable management of water resources.**"

These national priorities and targets are aligned to (and slightly more ambitious than) the global SDG targets 6 below.

- Target 6.1 – By 2030, achieve universal and equitable access to safe and affordable water for all.
- Target 6.2 – By 2030, achieve access to adequate and equitable sanitation and hygiene for all and end open defecation, paying attention to the needs of women and girls and those in vulnerable situations.
- Target 6.3 - By 2030, improve water quality by reducing pollution, eliminating dumping and minimising release of hazardous chemicals and materials, halving the proportion of untreated wastewater, and substantially increasing recycling and safe reuse globally.

These national commitments and global targets guide planning and target setting at the regional and district levels, enabling intergovernmental alignment for efficient collaboration and maximising results.

1.4.2 WASH POLICY ENVIRONMENT

The ASNAN WASH Master Plan was developed, taking into consideration the WASH policy context. The WASH sector policies, strategies and action plans outlined below reflect the institutional context within which the ASNAN WASH master plan was developed.

The Environmental Sanitation Policy (ESP), first published in 1999 and revised in 2010, was under revision to meet current development objectives and address the aspirations of sector actors. The consolidated National Water Policy (NWP), first prepared in 2007, was also under revision at the time of developing the ASNAN WASH Master Plan.

While the Ghana Water Company Limited (GWCL) is primarily responsible for providing urban water services, the Community Water and Sanitation Agency (CWSA) has traditionally focused on rural water subsector improvement. The Environmental Health and Sanitation Directorate (EHSD) of the Ministry of Sanitation and Water Resources (MSWR) leads the sanitation and hygiene subsector. The Water Resources Commission (WRC) regulates and manages Ghana's water resources and coordinates related policies.

The Water Sector Strategic Development Plan (2012-2025) provides a framework for implementing Ghana's vision of sustainable water and basic sanitation for all by 2025, with policy objectives and targets for the water and sanitation sector. The National Environmental Sanitation Strategy and Action Plan (2010-2015) provides strategies and action plans specifically for the environmental sanitation subsector. It guides planning at the district level (for the development of the District Environmental Sanitation Strategy and Action Plan - DESSAP) by the Metropolitan, Municipal and District Assemblies (MMDAs) for implementation.

The development of the Ghana Water, Sanitation and Hygiene Sector Development Programme (GWASHSDP) was underway to create one unified water resources management, water supply, sanitation, and hygiene development programme for Ghana. The GWASHSDP is expected to provide strategies and action plans specifically for the environmental sanitation subsector to inform planning at the district level (for the development of the District Environmental Sanitation Strategy and Action Plan - DESSAP).

2 PROFILE OF THE DISTRICT

This section describes the physical characteristics, demographics, political administration, social-cultural context, and economic situation of the Asunafo South District pertinent to WASH service delivery.

2.1 PHYSICAL FEATURES

The Asunafo South District lies within Latitudes 6°41'(6.6833°) North and Longitudes 2°27'(-2.45°) West. It covers a total land surface area of about 922 sq km and has about 132 settlements with major towns as Kukuom, Noberkaw, Kwapong, Sankore and Abuom. The district shares boundaries with Asunafo North Municipal to the North, Juaboso District to the South-West, Sefwi-Wiaso District (Western Region) to the South-East and Atwima Mponua District (Ashanti Region) to the East. Kukuom, the district capital is about 11 km (approximately 15-minute drive) from Goaso, the regional capital of Ahafo region.

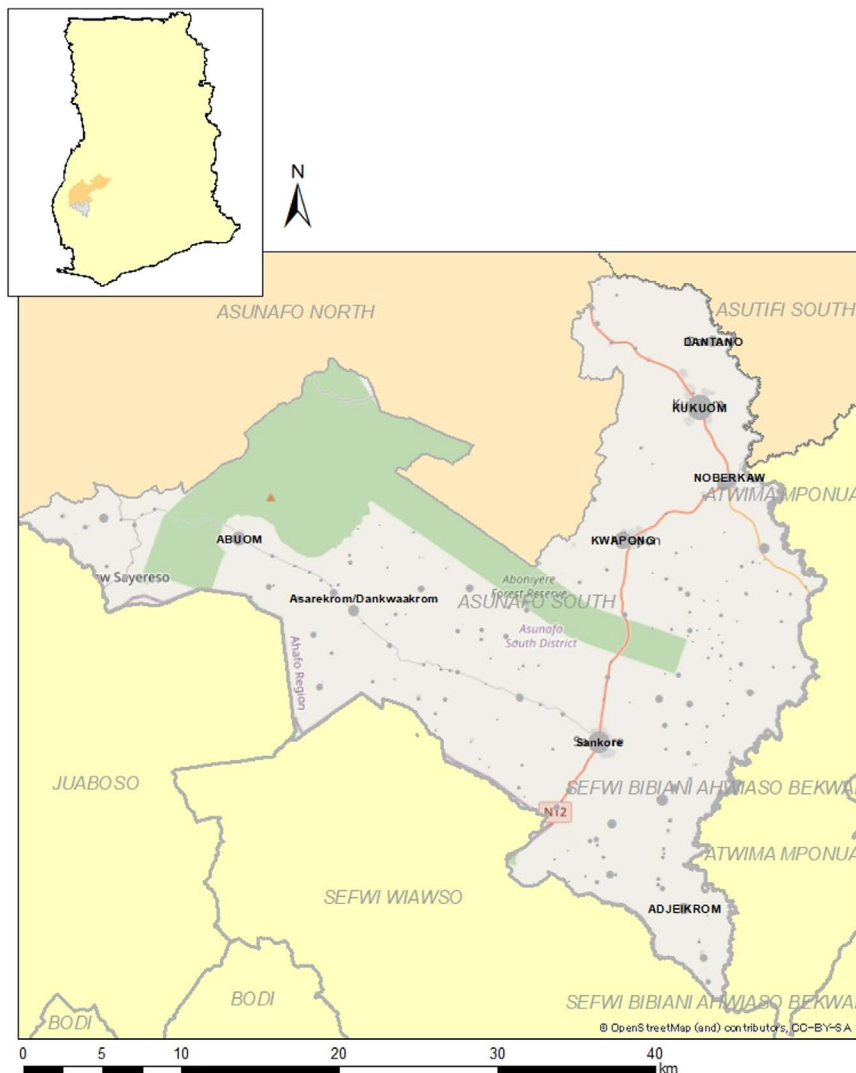


Figure 3 Map showing Asunafo South District

2.1.1 CLIMATE

The Asunafo South District lies within the wet semi-equatorial climatic zone characterised by double rainfall maxima occurring between June and October. The first and major rainy season occurs between April and July whilst the second and minor rainy season is from September to October. The mean annual rainfall is between 125 cm and 175 cm, while the dry season, which is usually characterised by the harmattan dry and dusty winds, commences in November and ends in March.

2.1.2 VEGETATION

Asunafo South District lies within the moist semi-deciduous forest region of Ghana where different trees species of economic value such as Onyina/Ceiba, Dahoma, and Sapele Mahogany, Framo, etc. are found. However, the original forest vegetation cover has depleted over time into secondary forest due to indiscriminate and illegal felling of trees for timber resources and other traditional farming practices such as slash and burn, charcoal production, among others. The double rainfall maxima are conducive for the cultivation of cash crops and afforestation programmes.

2.1.3 RELIEF AND DRAINAGE SYSTEMS

The district's landscape is generally undulating and rises between 500 feet to a little over 1000 feet above sea level. The district is drained by two main rivers, namely: River Tano and River Sui. The rugged nature of the topography coupled with the vegetative cover may not support intensive agricultural mechanisation. The presence of rivers and other water bodies in the district offer the potential for developing small scale irrigation schemes and freshwater fishing or aquaculture.

2.1.4 GEOLOGY AND MINERAL DEPOSIT

The district is underlain mainly by Precambrian, Birrimian and Tarkwainan formations with Ferralsols a being the predominant soil type. Ferralsols normally have a high hydraulic conductivity and favourable aerobic condition and are easily penetrable by roots. These characteristics contrast with low water holding capacity and poor nutrient status which is difficult for agricultural purposes.

2.1.5 WATER RESOURCE MANAGEMENT

Water resource management is critical to the continuous availability of water for provision of water services without compromising sustainability. The district is within the Tano basin - one of the principal Southwestern river basin systems of Ghana with a total catchment area of about 15,000 km².

Environmental degradation resulting from illegal lumbering, farming along riverbanks and improper application of agro chemicals pose a threat to the sustainability management of water bodies in the district.

In line with the Tano basin IWRM plan, the district is collaborating with the Tano Basin office of the Water Resource Commission to:

- Engage landowners on the need to protect water bodies.
- Involve the traditional leaders and communities in catchment protection activities.
- Undertake tree planting activities along the buffer of the Tano river.

2.1.6 NATURAL RESOURCE UTILISATION

Asunafo South District is endowed with numerous natural resources, including forest, timber, arable lands, water bodies and others. The primary threats to the existence of the forest include slash-and-burn farming, bushfires, construction and uncontrolled illegal lumbering activities that are gradually destroying the vegetation and changing the ecology of the district.

2.2 DEMOGRAPHIC CHARACTERISTICS

The 2021 census found a total district population of 91,693 (Ghana Statistical Service, 2021). The urban population constituted 32% of the total population, while the rural constitutes 68%.

The estimated 2022 population is 92,977 and is expected to reach about 98,294 by 2026 and 103,915 by 2030 (see Table 1).

Table 1 Population projections for Asunafo South from 2022 – 2030

Year	Based on census data*
2021	91,693
2022	92,977
2023	94,278
2024	95,598
2025	96,937
2026	98,294
2027	99,670
2028	101,065
2029	102,480
2030	103,915

Source: *Projection based on census data and population growth rate of 1.4%

The main urban areas in the town are Kukuom, with a population of almost 12,000 people, Sankore, with a population of a little over 9,000 people, Kwapong, with a population of about 5,600 people. The communities Abuom, Noberkaw, Agyeikrom, Dantano and Asarekrom have a population of between 2000 and 3,500 and are therefore also considered urban. Anwiam is expected to pass the urban threshold of 2000 people in 2024, adding to the urban population.

The demand for WASH facility provision and services is projected to rise with the anticipated growth in population.

2.3 POLITICAL ADMINISTRATION

The Asunafo South District is one of the six (6) districts in the Ahafo Region of Ghana, carved out of the then Asunafo District Assembly, after it was split into Asunafo North and South under the Legislative Instrument (L.I) 1773 in line with government's objective of deepening decentralisation. The district was established in November 2004 with Kukuom as the district capital. The Assembly is made up of twenty-eight (28) Assembly Members. The Presiding Member, elected from among the Assembly Members, convenes and presides over the meetings of the Assembly. The Assembly is the highest planning, administrative, rating and political authority in charge of the district's development administration.

2.4 EDUCATION

The district currently has a total basic school infrastructure of 301 comprising of 236 publicly owned and 65 privately owned. As shown in Table 2, the district has 109 Kindergarten, 109 primary schools, 80 Junior Secondary Schools, 2 Senior Secondary Schools, and one (1) tertiary (Nursing Training) institution.

Table 2 School educational infrastructure in the district

Type of School	Public	%	Private	%	Total	Total%
Kindergarten (KG)	81	74.3	28	25.7	109	36.2
Primary school	81	74.3	28	25.7	109	36.2
Junior High School (JHS)	71	88.75	9	11.25	80	26.6
Senior High/Tech Sch.	2	100	0	0	2	0.7
Vocational Institutions	0	0	0	0	0	0
University/Tertiary	1	100	0	0	1	0.3

Sources: Asunafo South District Education Office, Kukuom, 2021

2.5 HEALTH CARE SERVICES

The district has 26 health facilities comprising three privately owned, one (1) Christian Health Association of Ghana (CHAG), and the remaining being publicly owned. These facilities include three hospitals, four health centres, 17 CHPS, one clinic and one Maternity Home. Malaria accounts for almost half of the top ten diseases followed by Upper Respiratory Tract Infections (URTIs), Rheumatism, intestinal worms and diarrhoeal diseases.

The top ten causes of outpatient morbidity in Asunafo South District are listed in Table 3.

Table 3 Top ten OPD diagnosis from 2019 to 2020

S/No.	2019			2020		
	Condition	Number	% Cont.	Condition	Number	% Cont.
1	Malaria	54,831	44.30	Malaria	49,900	43.02
2	Upper Resp. Tract Infections	26,854	21.70	Upper Resp. Tract Infections	19,849	17.11
3	Rheumatism & Other Joint Pains	9,499	7.68	Rheumatism & Other Joint Pains	11,033	9.51
4	Diarrhoeal Diseases	7,255	5.86	Intestinal Worms	8,157	7.03
5	Skin Diseases	7,226	5.84	Diarrhoeal Diseases	6,758	5.83
6	Intestinal Worms	6,187	5.00	Skin Diseases	5,768	4.97
7	Anaemia	5,711	4.61	Anaemia	5,179	4.47
8	Acute Urinary Tract Infection	2,775	2.24	Ulcer	4,901	4.23
9	Acute Eye Infection	2,244	1.81	Acute Urinary Tract Infection	3,069	2.65
10	Home Accidents and Injuries	1,180	0.95	Acute Eye Infection	1,376	1.19

Source: Asunafo South Health Directorate, 2021

Poor WASH is associated with malaria and is the main cause of faecal-transmitted infections (FTIs), including diarrhoeal diseases. The effectiveness of the ASNAN WASH Master Plan initiative is expected to contribute to a decline in the prevalence of WASH-related diseases.

2.6 ECONOMIC CONTEXT

The local economy is predominantly agrarian followed by the service sector, manufacturing and processing activities, commerce, informal small-scale businesses, and marketing. Agriculture is practised by about 74% of the population at subsistence level. The majority of the farmers are peasant farmers who largely depend on rain-fed agriculture and use a rudimentary traditional system of farming. The main food crops cultivated are maize, cassava, rice, plantains, and coconuts. The principal commercial crops grown include cocoa, oil palm, citrus fruit, coffee, and cashews.

2.6.1 REVENUE MOBILISATION AND EXPENDITURE MANAGEMENT

The District Assembly's main revenue sources include Central Government transfers (GoG), District Assemblies' Common Fund (DACF), Internally Generated Funds (IGFs), Responsiveness Factor Grant (DACF-RFG), and other donor funds etc.

The DACF is one of the mainstays of the Assembly; however, disbursements are often delayed. Internally Generated Funds, though regular, are relatively less than the DACF and GoG transfers. Grants from development partners have provided additional funding over the years. However, records indicate a decline in recent years. The District Assembly's revenue forecast for 2023-2030 is presented in Table 4.

Table 4 Asunafo South revenue projections for 2023 – 2030²

REVENUE PROJECTIONS									
REVENUE ITEM	2023	2024	2025	2026	2027	2028	2029	2030	GRAND TOTAL
IGF	577,336.70	635,070.37	698,577.41	768,435.15	845,278.66	929,806.53	1,022,787.18	1,125,065.90	6,602,357.92
GOG SALARIES	2,579,752.36	2,708,739.98	2,844,176.98	2,986,385.83	3,285,024.41	3,613,526.85	3,974,879.54	4,372,367.49	26,364,853.45
DACF	827,752.09	869,139.70	912,596.68	958,226.52	1,054,049.17	1,159,454.09	1,275,399.50	1,402,939.44	8,459,557.19
MP's CF	396,075.24	415,879.00	436,672.95	458,506.60	504,357.26	554,792.99	610,272.29	671,299.52	4,047,855.85
PWDs CF	88,235.95	92,647.75	97,280.14	102,144.14	112,358.56	123,594.41	135,953.86	149,549.24	901,764.06
DDF (DACF-RFG)	1,465,192.00	1,465,192.00	1,465,192.00	1,465,192.00	1,611,711.20	1,772,882.32	1,950,170.55	2,145,187.61	13,340,719.68
GOG DEPT	47,563.02	49,941.17	52,438.23	55,060.14	60,566.15	66,622.77	73,285.05	80,613.55	486,090.07
OTHERS	129,337.01	135,803.86	142,594.05	149,723.76	164,696.13	181,165.74	199,282.32	219,210.55	1,321,813.42
TOTAL	6,111,244.38	6,372,413.83	6,649,528.44	6,943,674.14	7,638,041.55	8,401,845.71	9,242,030.28	10,166,233.30	61,525,011.64

Source: Asunafo South District Assembly, 2022. Projections by DPCU

The Asunafo South District Assembly's overall revenue is projected to increase annually by about 8% on average, from GHC 6.1M (in 2023) to GHC 10.12M (in 2030). Total revenue is projected to rise by 4% a year between 2023 and 2026 and then by 10% after 2027. The anticipated annual revenue projections appear inadequate compared to the estimated average yearly cost required to implement the MTDP (2022-2025), as shown in Table 5.

² The exchange rate used throughout the document is the Bank of Ghana's rate: USD 1 is GHC 11.0230, as of September 5, 2023 <https://www.bog.gov.gh/treasury-and-the-markets/daily-interbank-fx-rates/>

Table 5 Estimated cost of MTDP (2022-2025)

Development Dimension	Programmes (PBB)	Programme Cost 2022-2025	Estimated Average Yearly Cost
Economic Development	Promote Economic Development	1,959,893.40	489,973.35
Social Development	Improve Social Services Delivery	851,225.00	212,806.25
Environment, Infrastructure and Human Settlement	Infrastructure Delivery and Human Settlement Management	54,747,057.70	13,686,764.42
	Improved Environmental and Sanitation Management	6,059,287.08	1,514,821.77
Governance, Corruption and Public Accountability			
Emerging Planning and Response (Including Covid-19 Recovery Plan), Implementation, Co-Ordination, Monitoring and Evaluation	Enhancement of the Management and Administration of the Assembly	6,124,205	11,531,051.25
Total		69,741,668.18	17,435,417.04

Source: Asunafo South District Assembly, 2021. MTDP 2022-2025

Revenue mobilisation was identified in the MTDP (2022-2025) as a challenge. The Assembly's annual revenues expected to be generated cannot cover the yearly average cost to implement the MTDP and other projects. Inadequate revenue is thus noted as a significant risk to achieving the objective of the ASNAN WASH Master Plan initiative. The Assembly through the DPCU has prepared a programme financing strategy over the planned period. The capacity of the ASNAN partners to work with the Assembly to generate the requisite revenue for the WASH intervention will be a critical success factor.

2.7 DEVELOPMENT PRIORITIES AND WASH SECTOR IN THE MTDP (2022-2025)

Relevant WASH sector issues and priorities in the Asunafo South Medium-Term Development Plan (MTDP, 2022-2025) were taken into consideration while preparing the ASNAN WASH Master Plan. Table 6 lists the top WASH-related development concerns that the MTDP has prioritised.

Table 6 Key development priorities for Asunafo South District

Sector	Key Development Issues/Priorities
Social Services	
Water	<ol style="list-style-type: none"> 1. Low access to improved water services 2. Poor and inadequate rural water infrastructure and services
Sanitation	<ol style="list-style-type: none"> 1. Low access to improved sanitation facilities
Hygiene	<ol style="list-style-type: none"> 1. Poor hygiene practices 2. Poor quality of hygiene services for children and families 3. Poor drainage system 4. Silting and choking of drains 5. Uncovered drains
WASH in Health Care Facilities	<ol style="list-style-type: none"> 1. Low access to basic WASH services in HCFs
Education (WASH in Schools)	<ol style="list-style-type: none"> 1. Low access to basic WASH services in schools

Source: Asunafo South District Assembly, 2021. MTDP 2022 – 2025

3 ANALYSIS OF CURRENT WASH ISSUES

This section discusses the findings from the WASH service monitoring and data collection exercise conducted to assess the state of water services, sanitation services, and WASH in institutions (schools and health care facilities). The District's WASH challenges, gaps and opportunities are also presented.

3.1 WATER SERVICE LEVELS (URBAN AND RURAL)

Figure 4 presents the water service levels for the population in the district. It shows that a small proportion of the urban population has access to potentially safely managed water services, as they have access to piped water supply on premises. As water quality and availability have not been taken into account here, this indicates potential, rather than actual safely managed water services.

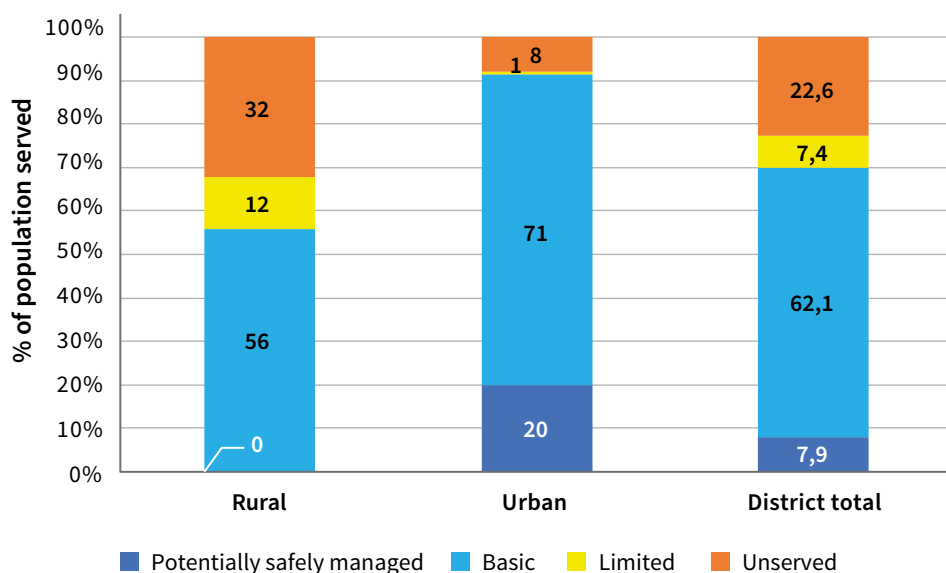


Figure 4 Water service level per asset data
Source: Asunafo South District Assembly, 2022

The proportion of people with limited water services (improved water supply, but not within a 30 min round trip) is not very big (7%). The household survey found that the majority of people with access to improved water services had so within a 30 min round trip (87% of households using boreholes with handpumps as their main source of water supply had access within 30 min round trip).

Figure 5 shows a considerable part of the population does not have access to (communal) improved water services, with almost 32% of rural population and about 8% of the urban population without improved water services.

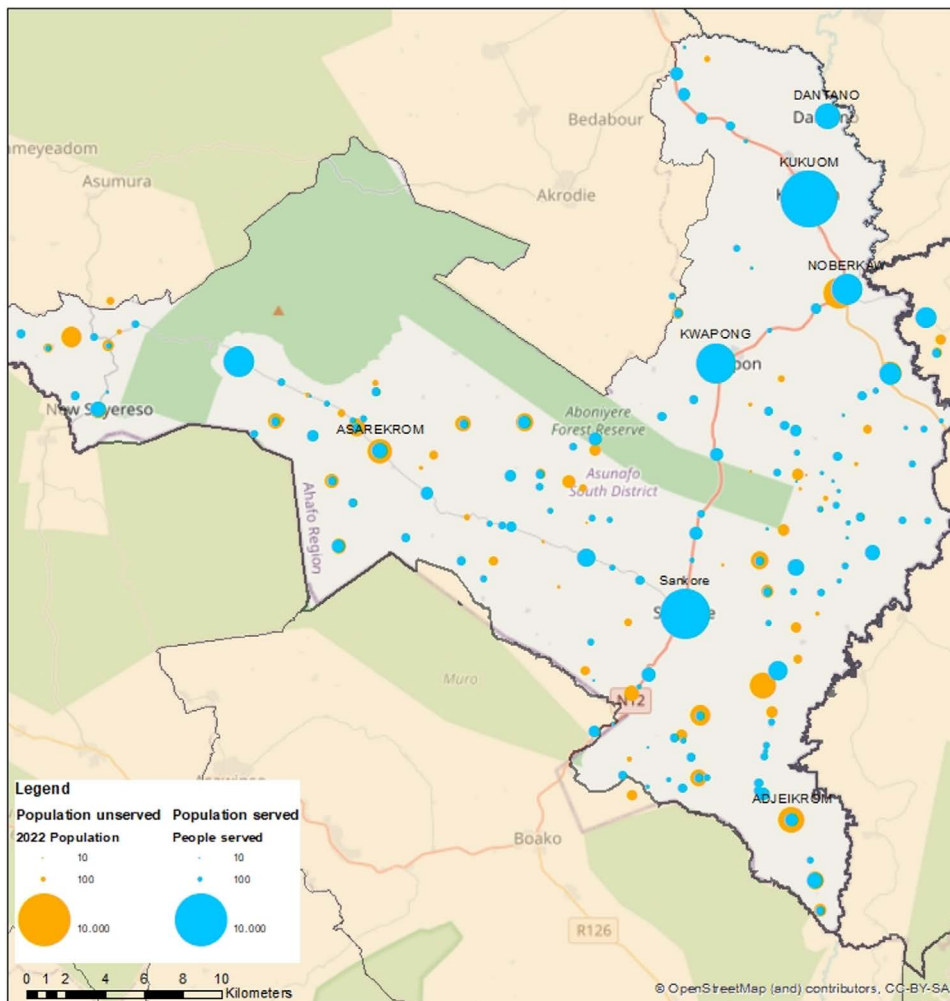


Figure 5 Served and unserved communities
 Source: Asunafo South District Assembly, 2022

A total of 32 rural communities were found to not have any water supply assets at all. In addition, 13 communities were found to have broken down or abandoned water supply assets. As shown in the table below, six of the eight urban communities were fully served. However, the proportion of people with access to household connections (potentially safely managed services) is very low. (See Table 7)

Table 7 Urban population served and unserved

Community	% people served	% people served with potentially safely managed	Number of people unserved
Kukuom	100%	28%	0
Sankore	100%	47%	0
Kwapong	100%	9%	0
Abuom	100%	0%	0
Noberkaw	100%	0%	0
Agyeikrom	24%	0%	1936
Dantano	100%	0%	0
Asarekrom	41%	0%	1300

Source: Asunafo South District Assembly, 2022

3.1.1 WATER SERVICE DELIVERY MODELS

Water supply services in Asunafo South are provided through the following main service delivery models:

- Three WSMT-managed small town schemes (Kukuom Water and Sanitation Management Team, Kwapong small town Water and Sanitation Management Team, Sankore Water and Sanitation Management Team), with a mix of household connections and public standpipes
- Limited mechanised boreholes (79)
- Boreholes and hand dug wells with handpumps (234)

As shown in Figure 6, both the three piped schemes as well as the 234 handpumps each serve almost a fifth of the population. A further 30% of the population is served by limited mechanised boreholes.

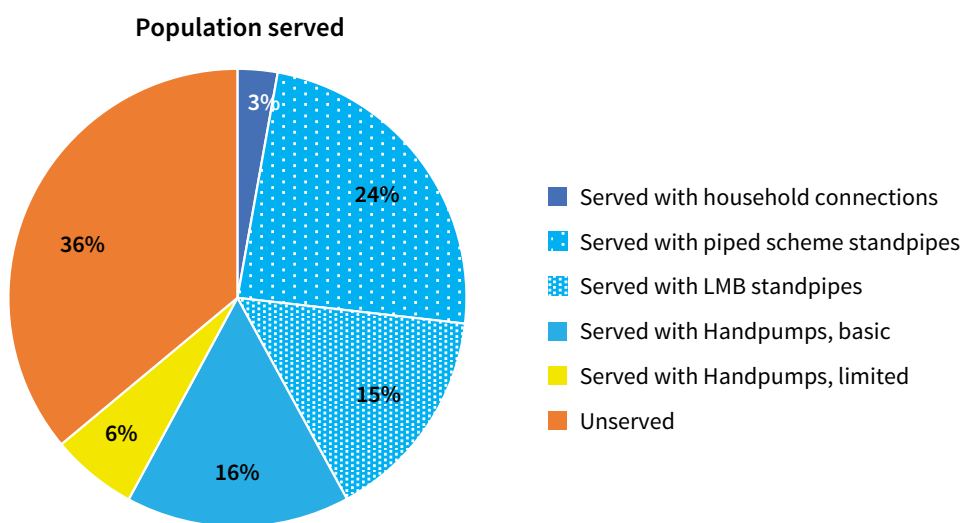


Figure 6 Distribution of water service delivery models

Source: Asunafo South District Assembly, 2022

In addition to these service delivery models, people use hand dug wells without handpumps and surface water.

3.1.2 WATER SUPPLY ASSETS AND MANAGEMENT

Figure 7 presents an overview of the water supply assets in the district, including handpumps, piped schemes and limited mechanised boreholes, and standpipes connected to piped schemes.

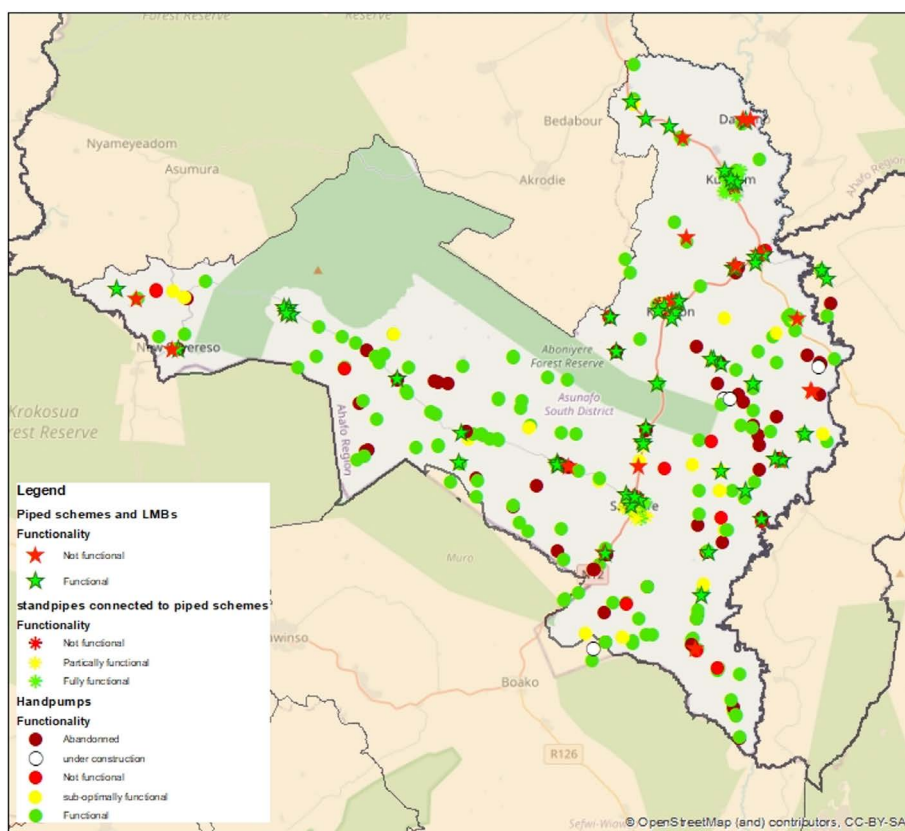


Figure 7 Map of water supply assets
 Source: Asunafo South District Assembly, 2022

Piped schemes

Table 8 presents the main infrastructural characteristics of the three piped schemes in the district. It shows that the three schemes are more or less of a similar size, each with a service area population of about 10,000 people. The four schemes are more than 10 years old, but all three were reported to have been recently (2021-2022) rehabilitated.

Table 8 Piped scheme characteristics

	Kukuom Water and Sanitation Management Team	Kwapong small town Water and Sanitation Management Team	Sankore Water and Sanitation Management Team
Number of sources	4	3	2
Number of functional sources	3	2	2
Number of household connections	672	91	843
Number of standpipes	23	13	24
Number of standpipes assessed	13	22	24
% of assessed standpipes functioning at time of visit	100%	55%	71%
Number of standpipe spouts	46	26	48
Service area population	11,532	10,000	9,047

Source: Asunafo South District Assembly, 2022

As shown in Table 9, data is missing on key performance indicators, including amount of water produced and non-revenue water, and for Kwapong water scheme also on operating cost recovery and staffing. For the two schemes for which data is available on amount of water sold, the amount of water consumed per person in the service area is far below 20 litres per capita per day (lpcd). Continuity of water supply was not reported as a problem, except in Sankore, where water rotation is practised year round and water services are only available part of the day. Up-to-date water quality data, showing compliance with water quality standards, was not available for Kwapong water scheme. Operating cost recovery data was only available for Kukuom with a ratio only slightly above 1, and Sankore, with a ratio below 1. Number of staff per 1000 connections for Kukuom seemed rather high at 25 per 1000 connections, which indicates challenges with staffing efficiency. The proportion of female staff, especially in management positions, is very low.

Table 9 Piped scheme key performance indicators

	Kukuom Water and Sanitation Development Board	Kwapong small town Water and Sanitation Development Board	Sankore Water and Sanitation Management Team
Total amount produced	No data	No data	No data
Total amount sold in m3/year (and in lpcd)	49,538 (12 lpcd)	No data	39,173 (12 lpcd)
Non-Revenue Water (NRW)	No data	No data	No data
Continuity (average hours per day with supply)	24	24	7
Water quality compliance	100	0	100
Bill-Revenue collection efficiency (%)	40%	No data	8%
Operating Cost Coverage (OCC)	1.02	No data	0.97
Tariff for household connections (GHC/m3)	6.48	6	5
Number of staff members per 1000 connections	25	No data	14
Share of women from total staff	30%	No data	20%
Share of women in management position	0%	No data	0%

Source: Asunafo South District Assembly, 2022

Limited mechanised boreholes

There are some 79 limited mechanised boreholes in the district. The majority of these have been implemented relatively recently, with almost half (36 of 79 LMBs) constructed since 2020. Most limited mechanised boreholes have a single standpipe. They are commonly connected to the electricity grid (with the exception of six LMBs which have solar panels and four which have a generator). Of the 79 LMBs, 61 (77%) are functional.

A total of 41 (52%) LMBs were reported to be managed by WSMTs, while 21 (27%) were reported to be managed by private persons. For 9 LMBs, the management structure was unknown. The remaining LMBs were managed by institutions (two (2) by HCFs and five (5) by religious bodies) and for one LMB, there was no management structure in place.

Users contribute to the operational costs for 67 (85%) out of the 79 LMBs. Amounts paid range from 0.10 to 0.20 GHC per bucket (amounting from 5.56 GHC to 11.11 GHC per m3, which is more or less in line with household connection tariffs for piped schemes).

Handpumps

There are some 244 handpumps in the district. The majority of handpumps in the district are of the Afridev type. Only about 8% of handpumps have been constructed relatively recently, since 2020. The majority of handpumps were reported to have been constructed with financial support from local (78) or national (116) government. Some 24 handpumps have been constructed by various NGOs, including Action Against Rural Poverty (five (5) handpumps in 2021) and CARE International (four (4) handpumps in 2021 and 2022). Cocoa companies like Armajaro Limited have

constructed handpumps as well over the years (some 20 handpumps). Some four (4) handpumps were constructed with support from ChinaAid in 2017.

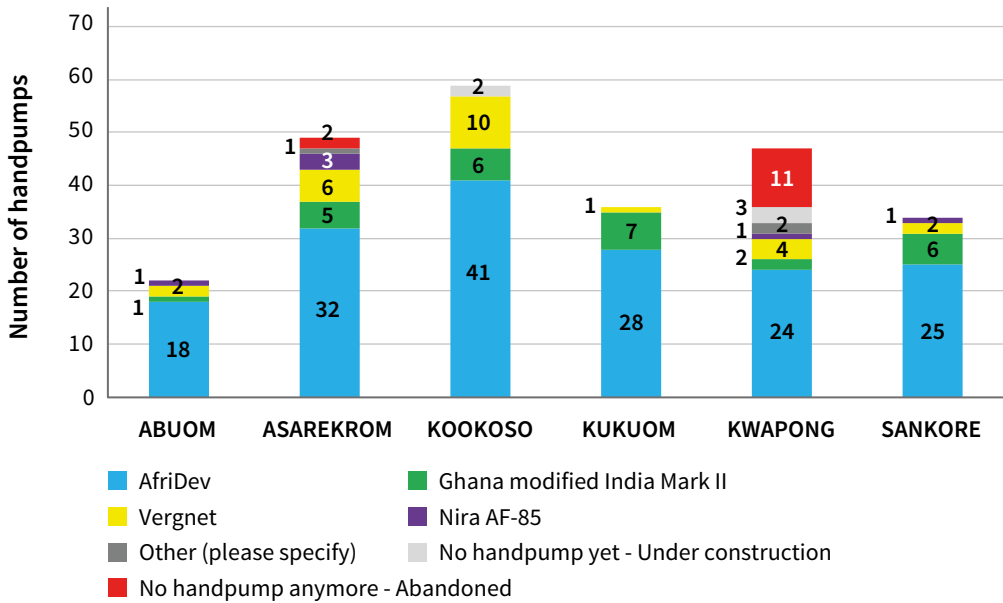


Figure 8 Handpump types
 Source: Asunafo South District Assembly, 2022

About 64% of handpumps were found to be optimally functioning at the time of the assessment, providing water within five (5) strokes. About 10% of handpumps provided water, but it took more than five (5) strokes. About 7% of handpumps were not functioning at the time of the visit, and about 20% had not been functioning for over one (1) year (considered as “abandoned”).

Of the non-abandoned handpumps, some 66% was functioning for at least 95% of the year (so with breakdowns of less than 18 days over the last year).

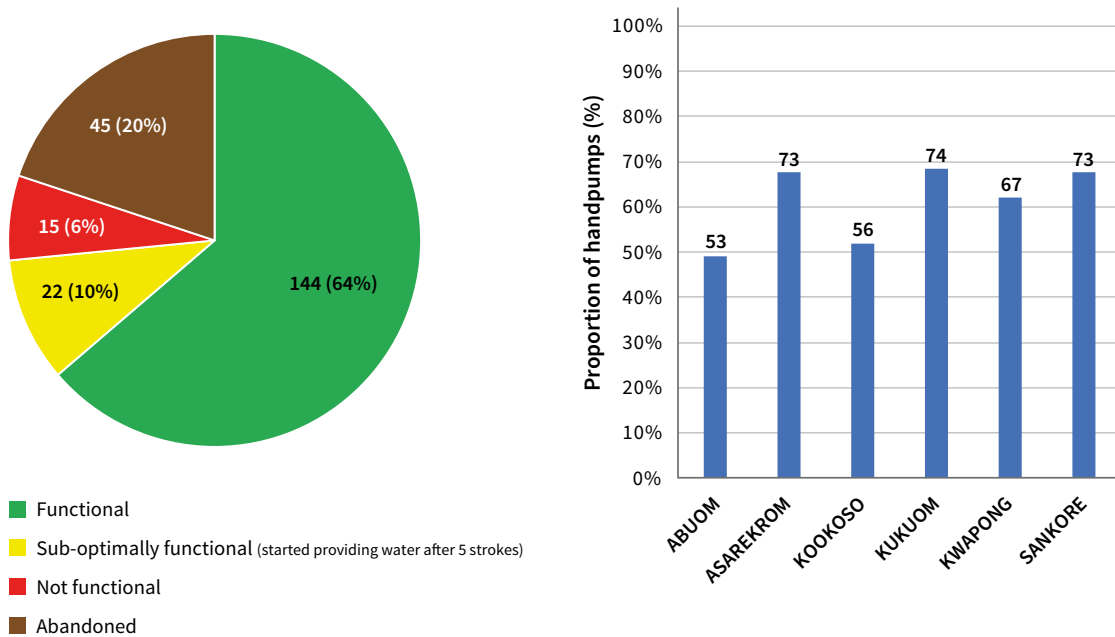


Figure 9 Handpump functionality (right) and reliability (left)

Slightly less than half (46%) of non-abandoned handpumps have management structures (mainly WSMTs) in place.

Table 10 Handpump management

	Abuom	Asarekrom	Kookoso	Kukuom	Kwapong	Sankore	Total
Small community WSMT (WATSAN)	3	36	1	15	13	5	73
Other	0	1	0	5	1	4	11
No management structure	16		47	11	10	13	97
Summary	19	37	48	31	24	22	181

Source: Asunafo South District Assembly, 2022

For only 27 handpumps, users were reported to contribute to operational costs. For 16 handpumps, this was only done at time of breakdown. For the remaining handpumps, tariffs ranged from 0.10 to 0.20 GHC per bucket (amounting from 5.56 GHC to 11.11 GHC per m³, more or less in line with household connection tariffs for piped schemes).

Only a few of the 25 WSMTs in place and assessed met the benchmarks of the handpump service provider indicators, as shown in Table 11. The lack of management structures, their poor performance and the lack of mechanisms in place to ensure financial sustainability of water supply by handpump, pose major potential sustainability challenges and are likely to have contributed to the relatively low handpump functionality rate in the district.

Table 11 Handpump service provider performance

Number of WSMTs	25
Average number of handpumps managed per WSMT	1.8
G1: Composition of WSMT (BM: WSMT, composed in line with the CWSA guidelines, and has received initial training)	0%
G2: Record Keeping and Accountability (BM: All records are kept and up to date)	44%
G3: Freedom from Political Interference (BM: Any change that had occurred in the WSMT was not due to political or chieftaincy interference)	96%
O1a: Spare Parts Supply (BM: supply within 3 days)	20%
O1b: Area Mechanic Services (BM: Available within 3 days)	24%
O2a: Breakdown repair (BM: Generally done within 3 days)	14%
O2b: Routine Maintenance (BM: Carried out)	68%
O3: Water Quality Testing (BM: Carried out, by certified institution)	4%
FM1: Revenue and Expenditure Balance (BM: R/E ratio >1)	24%
FM2: There is sound financial management (BM: Bank account and up-to-date account records in place)	8%
FM 3: Tariff setting (BM: Tariff in place)	40%
FM4: Facility Management Plans (BM: Facility management plan that spells out the rules for the WSMT in place)	16%

Source: Asunafo South District Assembly, 2022

3.1.3 OVERVIEW OF MAIN WATER SERVICE CHALLENGES

Main water challenges identified include:

- Low coverage of at least basic services, with a considerable proportion of the population depending on surface water and unimproved water sources.
- Some 1,606 households with potential safely managed water services in urban areas, but no household connections in rural areas.
- Challenges with water availability (continuity) in the Sankore water supply scheme and with water quality compliance in the Kwapong piped scheme. These could prevent households from accessing safely managed water supply.
- Lack of data required for performance monitoring of piped schemes.
- Functionality challenges, especially for community-managed handpumps.
- Sustainability challenges related to handpump water service provision, with less than half of handpumps having a management structure and with only 27 handpumps having financial structures in place for ensuring sustainable water service provision.
- Low capacity and performance of handpump WSMTs.

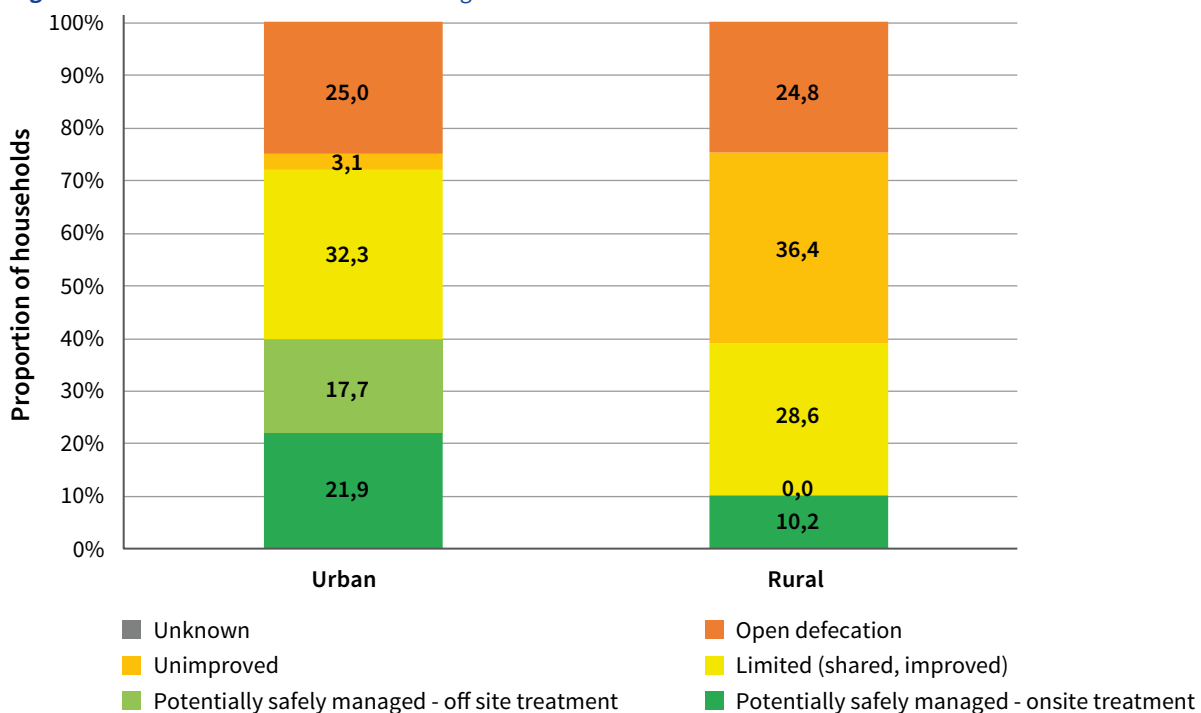
3.2 SANITATION SERVICES

3.2.1 SANITATION SERVICE LEVELS

As shown in Figure 10 open defecation is still practised by a considerable part of the urban (25%) as well as the rural (25%) population. In urban areas, households mainly access limited sanitation facilities shared with other households. In rural areas, a large proportion of households make use of unimproved sanitation facilities.

At least basic sanitation coverage is lowest in Sankore, Kookoso and Asarekrom area councils. These are also the area councils with the highest proportion of households practising open defecation.

Figure 10 Urban and rural sanitation coverage



Source: Asunafo South District Assembly, 2022

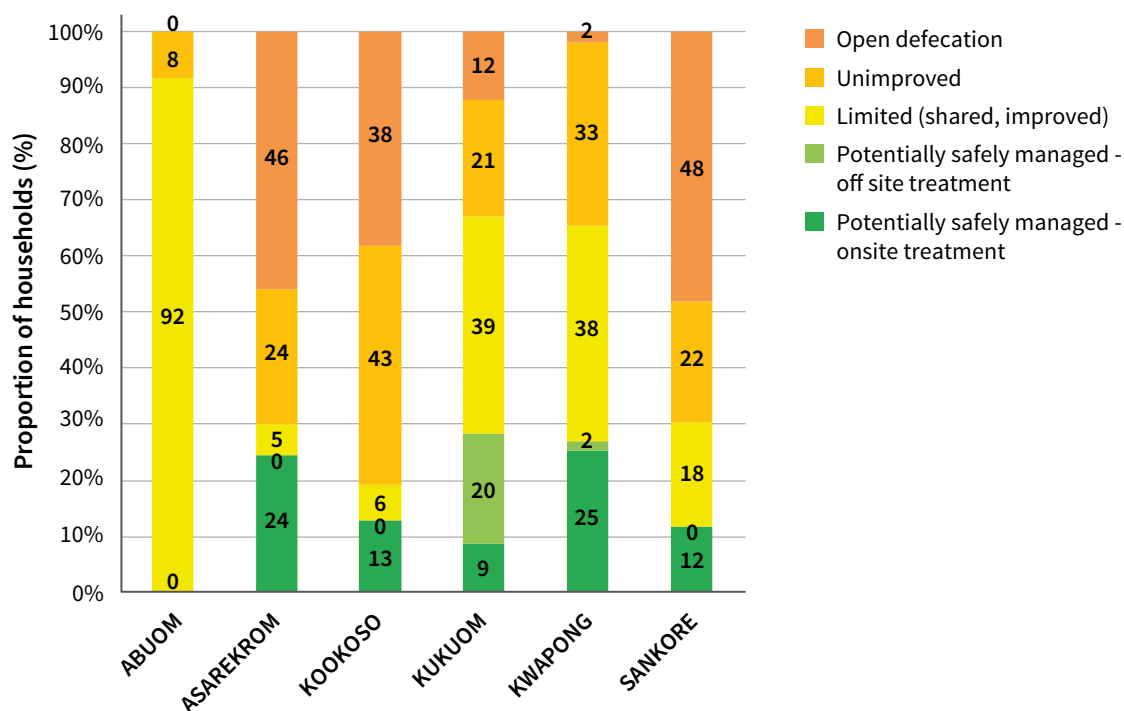


Figure 11 Sanitation coverage per area council
 Source: Asunafo South District Assembly, 2022

The main sanitation service delivery models in the district are:

- Latrines with onsite treatment, which are either private (potentially safely managed), shared (limited), or public (limited);
- Latrines with offsite treatment, which are either private (potentially safely managed), shared (limited), or public (limited);
- Unimproved latrines, which are either private, shared, or public (unimproved);
- Open defecation.

About 18% of the urban population uses private latrines with offsite treatment. In addition, about 4% use shared latrines with offsite treatment. Human waste is collected in septic tanks or pits which need emptying. However, pit emptying services are poorly developed in the district.

A considerable part of the rural (some 26%) and urban (27%) population use improved shared sanitation facilities with onsite treatment (pit latrines). (See Table 12)

Table 12 Proportion of households with access to sanitation facilities

Count of District	Total district				Urban				Rural			
	Private	Shared	Public	OD	Private	Shared	Public	OD	Private	Shared	Public	OD
Improved, onsite treatment	14%	10%	17%		22%	16%	11%		10%	7%	19%	
Improved, offsite treatment	6%	1%	0%		18%	3%	1%					
Unimproved	13%	4%	8%		2%	1%	0%		18%	6%	12%	
Unknown	0%	0%	1%		0%	1%	0%		0%	0%	2%	
OD				25%				25%				25%

Source: Asunafo South District Assembly, 2022

3.2.2 SANITATION INFRASTRUCTURE ALONG THE SANITATION CHAIN

This section outlines the sanitation infrastructure along the sanitation chain in the district, going from capture and containment, emptying and transport, to treatment and disposal.

Capture and containment of faecal sludge takes place at latrines and Water Closets toilets in the district, including private, shared and public facilities with onsite treatment and disposal, and with emptying and transport and offsite treatment and disposal.

The household survey found a considerable number of households using public facilities. According to the MTDP, there were nine (9) public latrines in the district.

There is a need for safe **transport, treatment and disposal** of faecal sludge from facilities with offsite treatment. However, the district has no cesspool emptier or sludge drying bed or treatment plant.

The 2022 household survey found that only three (3) of 35 (9%) urban households with private latrine facilities reported to have their pits or septic tanks emptied by cesspool emptiers.

3.2.3 SOLID WASTE MANAGEMENT

The management of solid waste in the district is far from satisfactory as the majority of residents practise crude dumping with all its environmental consequences. Limited communal collection of waste is available in Kukuom township (Achiase and Abromamu), Kwapong (market and Methodist) and Sankore (Zongo, new site and Minister's Road). Efforts by the district to introduce door-to-door collection by Zoomlion Company Limited, a private waste management organisation, did not have any significant impact on waste collection because residents were unwilling to pay for the collection. Transportation of waste from transfer stations to the final disposal sites is hampered because of the unserviceable state of the only refuse tractor. The district has no engineered final disposal site for waste treatment, however, this will be addressed with the completed modern integrated waste processing and recycling plant in the district with a capacity to process 400 tonnes of solid waste daily, for the region.

3.2.4 OVERVIEW OF MAIN SANITATION CHALLENGES

The main sanitation challenges include:

- About a quarter of households in urban and rural areas practise open defecation.
- High proportion of rural households use unimproved shared (18%) or unimproved private (18%) facilities.
- High proportion of urban households (19%) use improved shared facilities.
- Lack of collection, treatment and safe disposal of human waste from sanitation facilities which are supposed to have offsite treatment.

3.3 INSTITUTIONAL WASH SERVICES

3.3.1 SCHOOL WASH

A total of 135 schools (45% of the 301 schools in the districts) were assessed, including 63 primary schools, 48 JHSs, 21 combined primary and JHS schools and two (2) SHS/vocational schools and one (1) other school (the Kwapong Nursing Training College).

To have basic water services, drinking water has to be available from an improved source at the school. As shown in Figure 12 below, 31.1% of schools have basic water and 53.3% of schools are without water services. The remaining 15.6% of schools had limited water services, with an improved water source, but water was not available at the time of data collection.

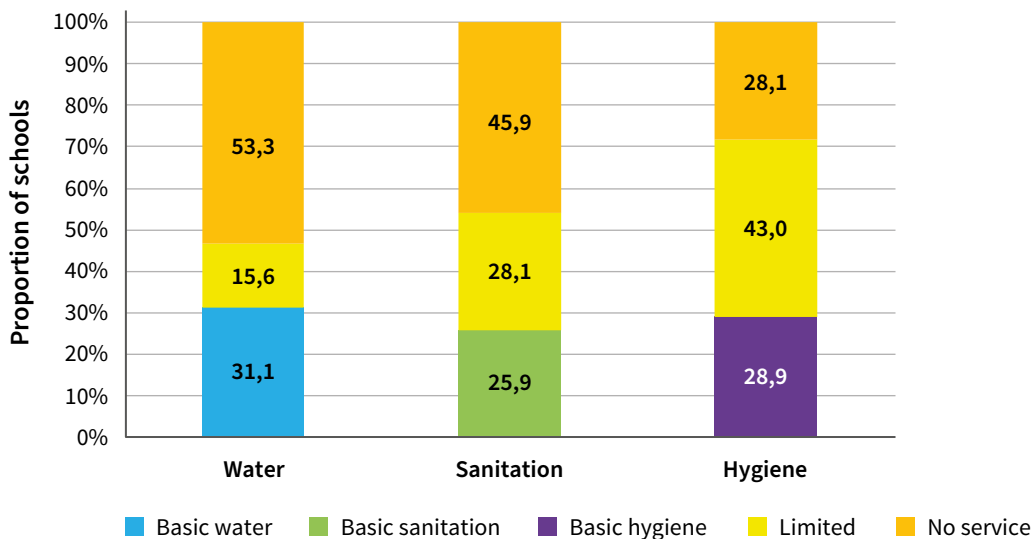


Figure 12 WASH in schools

Source: Asunafo South District Assembly, 2022

In order to have basic sanitation, schools should have improved sanitation facilities for students that are usable (accessible, functional, private) and sex separated. Overall, 26% of schools have basic sanitation services. Some 46% of schools were without improved sanitation facilities (30.4% without any facility and 15.6% with unimproved facilities). Of the remaining 28% of schools with limited sanitation services, the majority did not meet the basic sanitation benchmark because of lack of privacy (which means there were no closable doors that lock from the inside or there were large gaps in the structure).

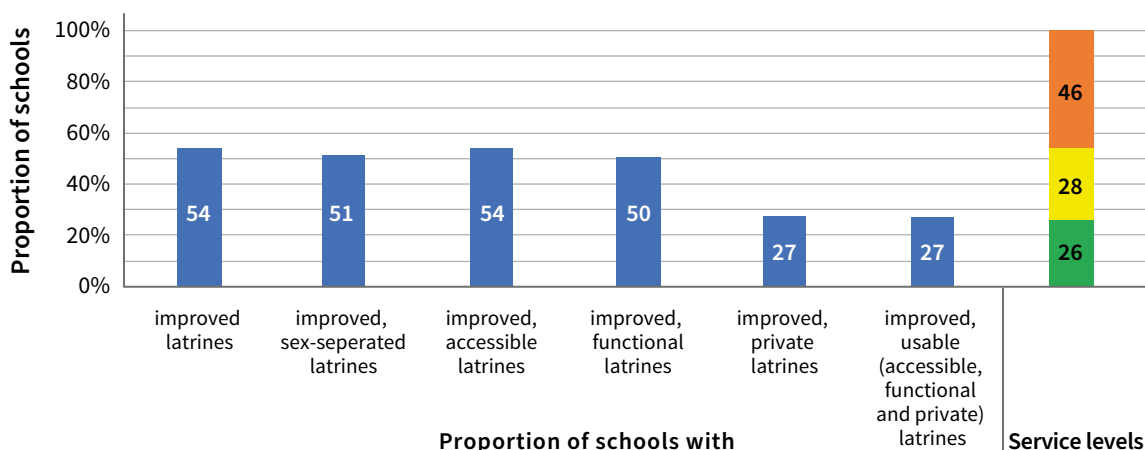


Figure 13 School sanitation services

In order to have basic hygiene services, schools should have handwashing facilities with water and soap. This was the case for 26% of the assessed schools. Some 46% had no handwashing facilities with water in place at all. The remaining schools did have handwashing facilities with water, but no soap.

3.3.2 HEALTH CARE FACILITY WASH

All 26 **health care facilities** have been assessed. Figure 14 below shows the number of HCFs with different levels of water, sanitation, hygiene and solid waste management services.

In order to have basic water services, the HCFs should have water available from an improved source on the premises. This was the case for 15 of the 26 HCFs. Seven HCFs were reported to have limited water services, they did not have an improved source on its premises (but with within 500 m), and four (4) HCFs were reported to not have water from an improved water source within 500 m. None of 11 HCFs without an improved water source on premises is within the service area of a small community or town water supply piped scheme.

To have basic sanitation services, HCFs should have improved sanitation facilities which are usable with at least one toilet for staff, at least one sex-separated toilet with menstrual hygiene facilities, and at least one toilet accessible for people with limited mobility. Although 23 of the 26 HCFs had improved sanitation facilities in place, only one (the Star of Hope hospital in Sankore) met all criteria for basic sanitation. The Mfreakrom CHPS compound was reported not to have sanitation facilities in place at all, and the Abuom Health Centre and Beposo CHPS were reported to have unimproved facilities in place. There are 19 HCFs with usable (functional, private and accessible) improved sanitation facilities, 17 with improved facilities for staff, 10 with latrines which are sex separated, but only two (2) with menstrual hygiene facilities and only four HCFs had sanitation facilities accessible to people with limited mobility.

In order to have basic hygiene services, a HCF should have functional hand hygiene facilities (with water and soap and/or alcohol-based hand rub) available at points of care, and within 5 metres of toilets. A total of 22 HCFs were reported to have hand hygiene stations available at point of care, but only 10 also had handwashing facilities with soap and water near the toilets.

To have basic solid waste management services, HCFs should have waste safely segregated into at least three bins, and sharps and infectious waste are treated and disposed of safely. In addition to the four (4) HCFs that indeed have basic solid waste management services in place, 20 HCFs were reported to have limited solid waste management services in place, with limited separation and/or treatment and disposal of sharps and infectious waste, but with not all requirements for basic services met, and two (2) HCFs without separate bins.

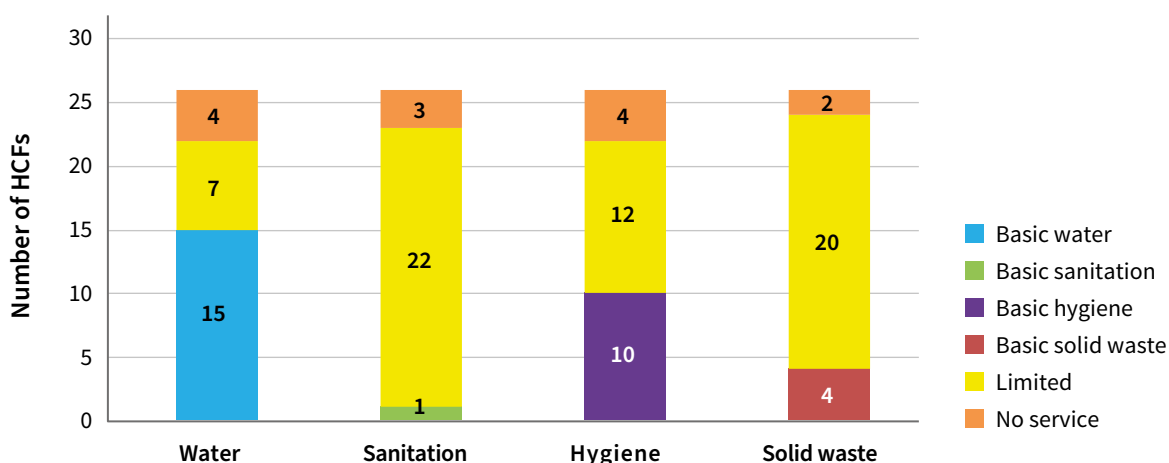


Figure 14 WASH in health care facilities (HCFs)

Source: Asunafo South District Assembly, 2022

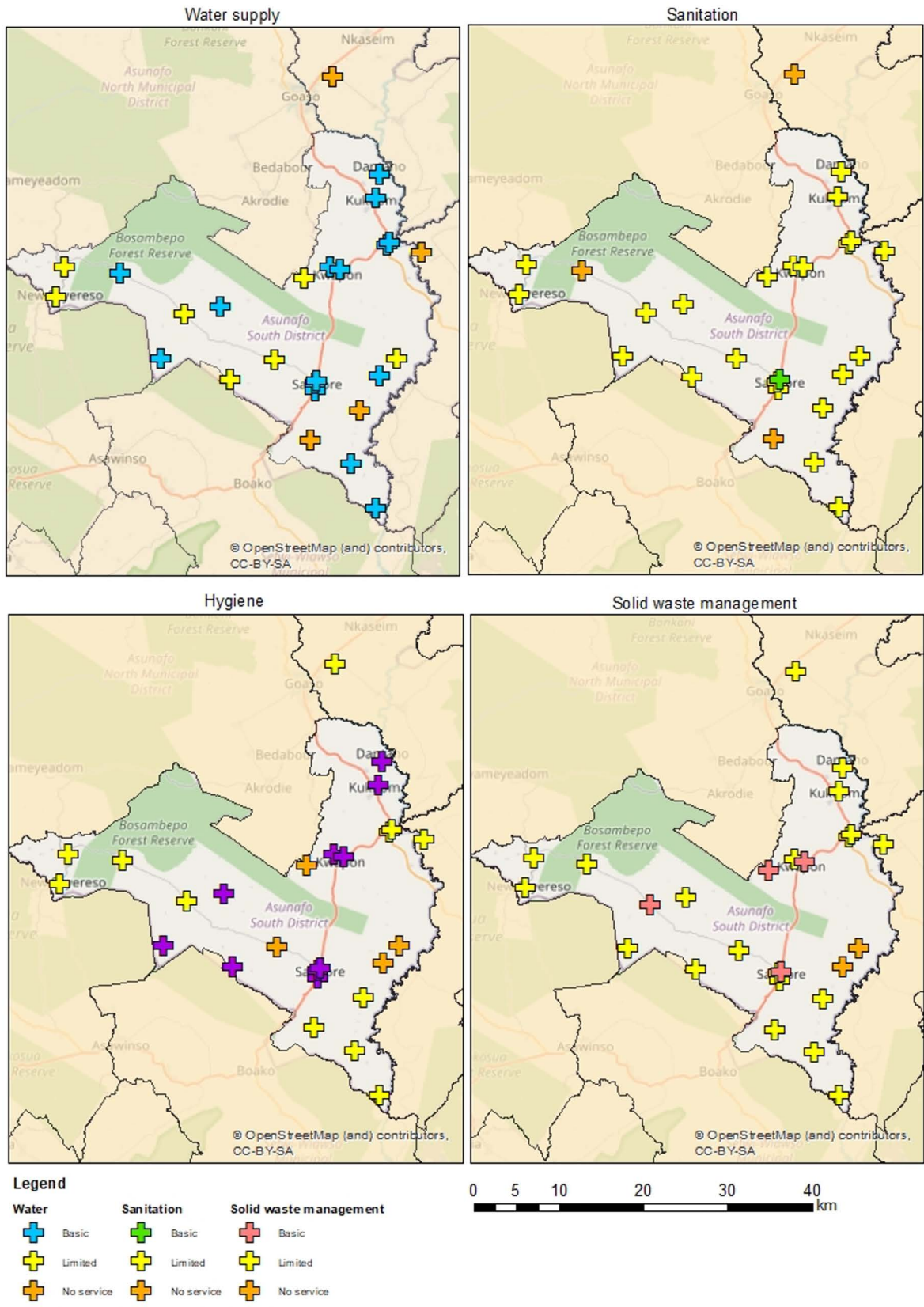


Figure 15 HCF WASH

Source: Asunafo South District Assembly, 2022

3.3.3 OVERVIEW OF MAIN INSTITUTIONAL WASH CHALLENGES

School WASH service levels are low:

- More than two-thirds of schools do not have improved water services which were functional at the time of the assessment.
- Almost two-thirds of schools did not have improved, usable, sex-separated latrines.
- More than two-thirds of schools did not have handwashing facilities with water and soap.

Health care facility WASH services are low, especially related to sanitation, hygiene and solid waste:

- There are 11 health care facilities which did not have water available from an improved source on their premises, with four (4) of these not having water supply within 500m.
- Only one HCF meets all basic sanitation standards. Only two (2) HCFs have menstrual hygiene facilities, and only four (4) have sanitation facilities accessible to people with a disability.
- Only 10 HCFs meet the basic hygiene service standards.
- Only four (4) HCFs have basic solid waste management in place.

3.4 KEY INTRACTABLE CHALLENGES IN THE DISTRICT

The Asunafo South District Assembly Medium-Term Development Plan (2022-2025) outlined key threats to the delivery of reliable and sustainable WASH services and the full implementation of the WASH master plan. These include:

- Emerging illegal small-scale mining “galamsey’ activities.
- Delay in the release of funds from central government, including DACF, DDF etc.
- Competing demands for water resources for domestic and commercial activities.
- Potential drying up of water sources as a result of destructive human activities and climate change.

3.5 KEY OPPORTUNITIES IN THE DISTRICT

Stakeholders including the chiefs in the district are fully committed to the realisation of universal WASH access by 2030. This was demonstrated at an inception meeting held in August 2022 to launch the master planning process when the District Chief and the chiefs pledged their support towards the addressing of WASH issues through the implementation of the master plan. Other key opportunities in the district that can be leveraged to support WASH delivery include:

- Presence of private sector support (including sawmills) to provide complementary funding for WASH infrastructure
- Strong traditional leadership
- Strong political commitment
- High water table and groundwater potential in most parts of the district
- High demand for and willingness of households to pay for water services
- Construction of engineered land-fill site ongoing (Zoomlion).

4 MASTER PLAN VISION TARGETS AND IMPLICATIONS

This section presents the vision of the ASNAN WASH master plan initiative. The WASH stakeholders developed the vision after taking into consideration the national commitments and local context in terms of key WASH issues, facility and service delivery situation, potential, opportunities, challenges, and constraints, among others. The ASNAN WASH master plan vision is presented along with the medium- (2026) and long-term (2030) targets.

4.1 VISION

The ASNAN WASH Master Plan initiative envisions “a district where every person in households, health and educational institutions have access to safe and sustainable water, sanitation and hygiene services by 2030”.

4.2 MEDIUM- AND LONG-TERM WASH TARGETS

The medium- and long-term targets for the respective WASH subsectors relative to the baseline situation are outlined below. The targets serve as the yardstick against which implementation success will be measured.

4.2.1 WATER SERVICE TARGETS

The ASNAN initiative will work to improve access to safe and reliable water supply services for all. Table 13 presents the targets for water within the medium to long term.

Table 13 Water service coverage and vision targets (% population)

Service Level	2022 baseline (%)			2026 Midterm Targets (%)			2030 Target (%)		
	Rural	Urban	Total	Rural	Urban	Total	Rural	Urban	Total
Safely managed	0%	20%	8%	0%	30%	12%	0%	40%	17%
Basic	56%	71%	62%	90%	70%	82%	100%	60%	83%
Limited	12%	1%	7%	9%	0%	5%			0%
Unserviced	32%	8%	23%	1%	0%	1%			0%

Source: Asunafo South District Assembly, 2022

The water service target is to increase the proportion of the population with access to safely managed water sources from 8% in 2022 to 17% by 2030. In addition, increase access to at least basic water services from 62% to 83% by the end of 2030, and reduce the population without access from 23% to 0% between 2022 and 2030.

4.2.2 SANITATION AND HYGIENE TARGETS

The ASNAN initiative will work to improve sanitation as an essential social service and major determinant for improving health and quality of life in the district. Table 14 provides an overview of the coverage and projections by 2030.

Table 14 Sanitation service coverage and vision targets (% households)

Service Level	2022 Baseline (%)			2026 Midterm Targets (%)			2030 Target (%)		
	Rural	Urban	Total	Rural	Urban	Total	Rural	Urban	Total
Safely managed	29%	40%	36%	53%	69%	64%	100%	100%	100%
Limited	45%	31%	36%	45%	31%	35%	0%	0%	0%
Unimproved	2%	4%	3%	2%	0%	1%	0%	0%	0%
Open defecation	25%	25%	25%	0%	0%	0%	0%	0%	0%

Source: Asunafo South District Assembly, 2022

The sanitation target includes increasing the proportion of households in the district with access to safely managed sanitation from 36% in 2022 to 100% by 2030. Eliminate the practice of open defecation by 2026 and the use of unimproved sanitation facilities by 2030.

4.2.3 WATER, SANITATION, AND HYGIENE IN SCHOOLS

WASH in schools is essential for students' retention and performance. Similarly, schools offer students opportunities to improve their hygiene, sanitation, and water behaviour. The ASNAN partners will work to increase the number of schools with access to basic WASH services such as:

- Supply from an improved water source on school premises
- Improved sanitation facilities, which are single-sex and usable
- Handwashing facilities, which have water and soap available

The medium- and long-term targets for water, sanitation and hygiene in schools are shown in Table 15.

Table 15 WASH service coverage and vision targets in schools (%)

Service Level	2022 Baseline (%)			2026 Midterm Targets (%)			2030 Target (%)		
	Water	Sanitation	Hygiene	Water	Sanitation	Hygiene	Water	Sanitation	Hygiene
Basic	31	26	29	70	70	90	100	100	100
Limited	16	28	43	10	20	0	0	0	0
No service	53	46	28	20	10	10	0	0	0

Source: Asunafo South District Assembly, 2022

4.2.4 WATER, SANITATION, AND HYGIENE IN HEALTH CARE FACILITIES

The medium- and long-term targets for WASH in health care facilities are presented in Table 16.

Table 16 Number of health care facilities with WASH service coverage and vision targets

Service Level	2021 Baseline (%)			2026 Midterm Targets (%)			2030 Target (%)		
	Water	Sanitation	Hygiene	Water	Sanitation	Hygiene	Water	Sanitation	Hygiene
Basic	13	1	10	19	10	22	26	26	26
Limited	9	22	12	5	16	0	0	0	0
No service	4	3	4	2		2	0	0	0

5 STRATEGIC DIRECTIONS AND ACTIONS

The ASNAN strategic directions and principles for WASH will guide progress towards achieving the WASH vision, objectives and targets set for the key result areas: water, sanitation, WASH in schools and WASH in health care facilities (HCFs). The strategic directions and principles express how the ASNAN partners will work to achieve the shared vision of “a district where every person in households, health and educational institutions have access to safe and sustainable water, sanitation and hygiene services by 2030”.

Figure 16 outlines the Strategic Directions and cross-cutting principles guiding progress to the adopted objectives and shared vision.

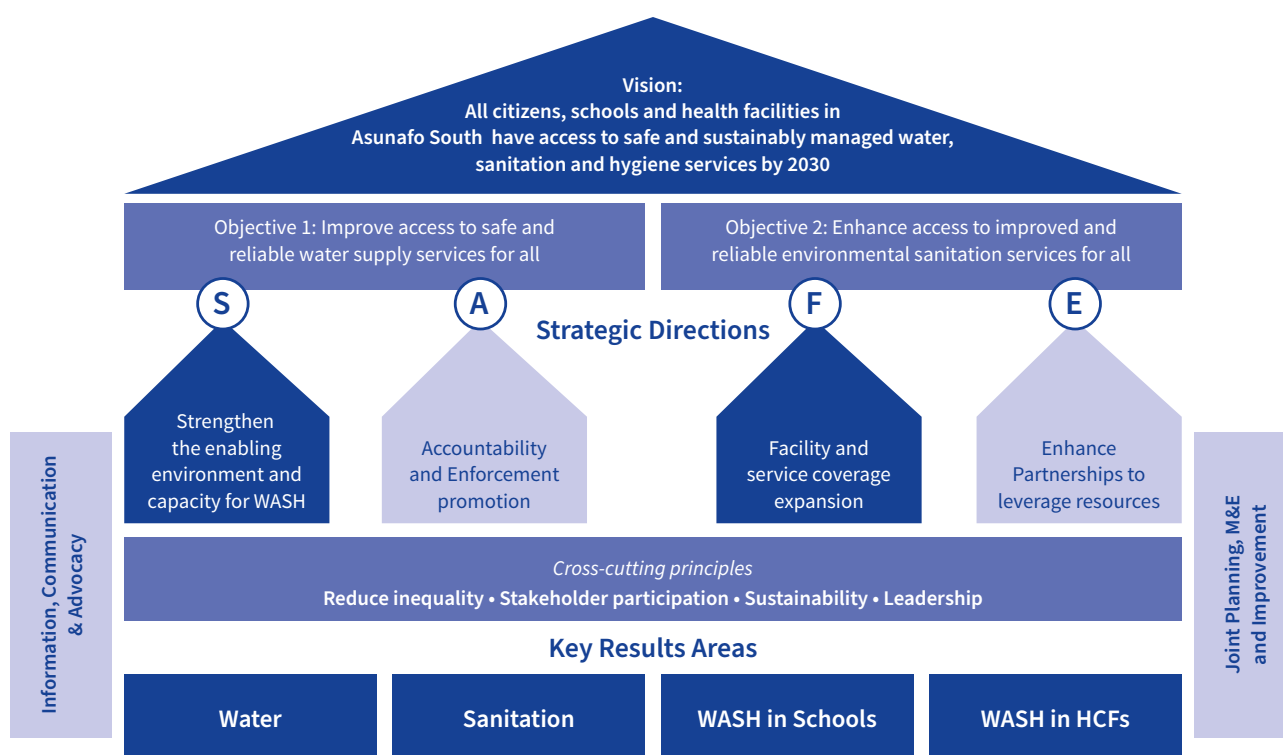


Figure 16 ASNAN strategic framework indicating vision, objectives and strategic directions

Source: Author's concept based on strategic actions negotiated by WASH stakeholders

The strategic directions to guide the ASNAN WASH master plan initiative, summarised as SAFE, are elaborated below.

5.1.1 STRENGTHENING THE ENABLING ENVIRONMENT AND CAPACITY FOR WASH

Within the decentralised framework of governance as defined by the Local Governance Act, 2016 (Act 936), the Asunafo South District Assembly is the highest political, administrative and planning authority at the local level and responsible for the overall governance and development of the district including WASH. The district has the full complement of the WASH team in various departments with the minimum professional requirement to perform their roles. However, the staff will require further training in critical areas of WASH service delivery including equity, mWater platform for data collection, infrastructure management, monitoring, evaluation and learning (MEL), and water resource management. The district has shown strong commitment to partnerships through collaborations

with the Catholic Relief Services, cocoa buying companies, timber companies and Amajaro Limited to provide WASH infrastructure for unserved communities. Knowledge levels of relevant WASH sector regulations and guidelines is high, but there is little evidence of application of regulations for effective WASH sector governance.

To achieve the shared vision, relevant capacities will be strengthened in the public and private sectors and communities empowered to improve the enabling environment to facilitate the achievement of ASNAN objectives and targets. The key actions relating to this strategic direction are provided in Table 17.

Table 17 Actions to strengthen the enabling environment and capacity for WASH

Result Areas	Key Actions
Water	<ul style="list-style-type: none"> • Build capacity of District Assembly staff in service monitoring and reporting and other WASH-relevant areas • Intensify public sensitisation drive on planning schemes, development control and service connection regulations and guidelines • Build capacity of WSMTs in tariffs setting, revenue mobilization, facility management planning, repairs and maintenance, water quality testing • Build capacity of managers of limited and piped schemes in financial management, and water quality test • Train area mechanics in repairs, maintenance, and water quality testing • Identify, train and certify local plumbers to undertake extensions in urban areas • Identify and build capacity of spare parts vendors to acquire fast moving parts • Identify, train, and equip area mechanics for routine maintenance and repairs of handpumps • Sensitise community members on the need to pay for water services • Review and establish new tariff systems for water facilities to reflect financial sustainability and equity • Ensure that implementers establish or constitute WSMTs before hardware implementation • Ensure effective asset management at the district level; including an updated asset management register and planning for major repairs and rehabilitation of water facilities • Involve Chiefs to stimulate communities to raise funds on pay-as-you-fetch basis for operation and maintenance costs
Sanitation	<ul style="list-style-type: none"> • Support households with technical guidance and skills to construct household sanitation services • Gazetting DA bye-laws and ensuring that they adequately address the requirement for the provision of toilet facilities for all new and existing houses (buildings) • Effective sensitisation on the need to construct household latrines • Strengthen skills for artisan networks to boost latrine construction for households • Scale-up sensitisation campaigns to promote proper handwashing, safe refuse disposal and hygiene practices
WASH in Schools	<ul style="list-style-type: none"> • Undertake sensitisation drive on WASH in schools • Allocate funds for the maintenance of schools WASH facilities • Strengthen the capacity of the school based SHEP coordinators on operation and maintenance of onsite WASH in health care facilities • Engage Parent Teachers Association/School Management Committees in the district to allocate funds for operations and minor maintenance of WASH facilities
WASH in HCFs	<ul style="list-style-type: none"> • Provide a clear and effective policy on water infrastructure in health care centres • Increase advocacy on funding for improved water facilities in health service delivery centres • Strengthen the capacity of the district health management team to monitor the performance of health WASH operators • Provide a clear and effective policy on sanitation infrastructure in health care centres • Increase advocacy on funding for improved sanitation facilities in health service delivery centres
Communications, advocacy and networks	<ul style="list-style-type: none"> • Build local capacity to undertake sensitisation and advocacy for WASH to sustain investments (e.g., at the Client Services Unit and the Information Services Department, WASH Desk) • Provide logistics such toll-free numbers for receiving customer feedback and connecting people to resources to address common problems

Result Areas	Key Actions
Cross-cutting	<ul style="list-style-type: none"> Enhance the capacity, skills, logistics and knowledge of the Works Department, District Environmental Health Unit and District Planning and Coordinating Unit to provide technical leadership and coordination of WASH activities and ensure equitable financing Undertake regular capacity needs assessments to determine gaps for remedial actions Develop annual action plans with clear budgets to roll out WASH master plan Organise annual planning and review meetings to take stock of progress Undertake annual service monitoring to establish service levels on WASH in communities, schools, and HCFs Carry out annual financial tracking of the district and other partner contributions to the WASH master plan implementation Undertake external marketing of the WASH master plan to attract additional funding Improve coordination and harmonisation in WASH to improve efficiency and policies through regular stakeholder dialogue Generate annual reports and share with all relevant stakeholders

5.1.2 ACCOUNTABILITY AND ENFORCEMENT PROMOTION

The ASNAN initiative will operate within a robust accountability framework that clearly outlines the roles, responsibilities, and interrelationships of all key stakeholders as a prerequisite for progress towards the shared vision and long-term sustainability of WASH services. In addition to enforcing existing legislation and bye-laws relating to WASH, the initiative will support relevant state actors and institutions, including the District Assembly and sub-structures and service providers (public and private), to become more responsive to the voices of citizens, particularly the marginalised. Equally, the initiative will support communities and rights holders to claim their rights and demand accountability from duty bearers and WASH service providers (public and private). Through the ASNAN mutual accountability framework, the key stakeholders will commit to demonstrating leadership in pursuing their assigned duties and be responsible for their actions and inactions. The robust accountability framework will facilitate predictability, transparency, stakeholder participation and good governance in WASH service delivery. The key actions relating to this strategic direction are provided in Table 18.

Table 18 Actions to promote accountability and enforcement

Result Areas	Key Actions
Water	<ul style="list-style-type: none"> Strengthening the monitoring of WSMTs from DA staff Improve water quality testing among WSMTs
Sanitation	<ul style="list-style-type: none"> Develop and implement effective monitoring systems that track building permits/ certificate of guarantee of household toilet provision in completed house
WASH in Schools	<ul style="list-style-type: none"> Enforce guidelines for WASH delivery in schools
WASH in HCFs	<ul style="list-style-type: none"> Enforcement of guidelines for WASH delivery in health institutions Enforce hygiene policy at health care facilities
Cross-cutting	<ul style="list-style-type: none"> Promote and enforce compliance with the ASNAN mutual accountability framework evident in signed Memorandum of Understanding (MoU) etc. Enforce stakeholder participation and the use of participatory approaches ensuring that state actors, private sector, service providers, communities and civil society actors are involved in WASH implementation Establish platforms for coordinating external support for WASH master plan implementation (MoUs, joint partner meetings etc.) Strengthen CSOs' use of existing platforms for citizen engagement on WASH/ IWRM Establish learning alliance platforms to promote learning and uptake of innovations on WASH Enhance transparency and social accountability for WASH service delivery Establish platforms for coordinating external support for WASH master plan implementation (MoUs, joint partner meetings etc.)

5.1.3 FACILITY AND SERVICE COVERAGE EXPANSION

The ASNAN initiative will work with the public and private sectors, civil society, and communities to directly expand WASH facilities and service coverage in the district. The provision of WASH facilities will target unserved and underserved rural and urban communities, schools, and health care facilities to reduce inequality in WASH access while addressing increasing demand. The ASNAN initiative will also support the local private sector, including plumbers, spare parts dealers, and borehole drillers, to meet demand sustainably and at affordable prices for service users. The key actions relating to this strategic direction are provided in Table 19.

Table 19 Facility and service coverage expansion

Result Areas	Challenges	Key Actions
Water	1. Low coverage of at least basic services, with a considerable proportion of the population depending on surface water and unimproved water sources.	1a. Repairs, replacement and rehabilitation of a total of 69 boreholes with handpumps. 1b. Construction of 50 additional boreholes with handpumps. 1c. Construction of 21 additional LMBs with 49 public standpipes. 1d. Construction of 2 additional small community schemes and a total of 14 additional public standpipes.
	2. Functionality challenges, especially for community-managed handpumps.	2a. Attract spare part dealers and maintenance services, especially in rural communities. 2b. Setting up and capacity building of handpump WSMTs (see above).
	3. Low household connections coverage.	3a. Construction of new small town and small community piped schemes (see 1d). 3b. Stimulation and facilitation of an additional 2,248 household connections, connecting to small town and small community piped schemes.
	4. Challenges with water availability (continuity) in the Sankore water supply scheme and with water quality compliance in the Kwapong piped scheme.	4a. Build capacity of WSMTs managing piped schemes (see above). 4b. Stimulation and facilitation of water quality testing and treatment for town and small community piped schemes.
Sanitation	1. About a quarter of households in urban and rural areas practice open defecation.	1a. Promotion of household toilet facilities through CLTS. 1b. Sensitisation drive on sanitation regulations, bye-laws and behavioural change. 1c. Enforcement of sanitation and building regulations and bye-laws. 1d. Implement the sanitation marketing model in urban areas.
	2. High proportion of rural households using unimproved shared (18%) or unimproved private (18%) facilities.	2a. Stimulate and facilitate construction of 5,883 improved toilet facilities with onsite treatment and 1,676 with offsite treatment in rural areas.
	3. High proportion of urban households (31%) using improved shared facilities.	3a. Stimulate and facilitate construction of 8,752 improved toilet facilities with offsite treatment and 5,106 with onsite treatment in urban areas.
	4. Lack of collection, treatment and safe disposal of human waste from sanitation facilities which are supposed to have offsite treatment.	4a. Explore opportunities for improving collection, treatment and safe disposal of faecal sludge from latrines with offsite treatment.
	5. Lack of collection, treatment, and recycling of solid waste.	5a. Encourage citizens to sign up for door-to-door waste collection. 5b. Procure trucks for transportation of solid waste to final disposal sites. 5c. Construction of waste treatment and recycling plant.

Result Areas	Challenges	Key Actions
WASH in Schools	1. An estimated 161 schools are without an improved water source.	1a. Stimulate and facilitate connection of schools without water supply which are within service area of piped scheme to this scheme. 1b. Construction of boreholes and limited mechanised borehole systems at schools without improved water sources.
	2. An estimated 138 schools do not have improved sanitation facilities.	2a. Construction of improved, sex-separated and usable toilet facilities in schools without toilet facilities.
	3. An estimated 80 schools have latrines which do not provide privacy.	3a. Stimulate schools to ensure that latrines provide privacy and can be locked from the inside.
	4. An estimated 85 schools do not have handwashing facilities.	4a. Construction of handwashing facilities in schools without such facilities.
	5. An estimated 129 schools have handwashing facilities with water in place but are lacking soap.	5a. Stimulate good handwashing practices with soap at all schools.
WASH in HCFs	1. 13 HCFs without improved water supply on premises.	1a. Construction of boreholes and limited mechanised borehole systems at 11 HCFs without improved water source on premises, prioritising the 4 HCFs without water supply or water supply from an improved source beyond 500 m of the HCF.
	2. 3 HCFs without improved sanitation facilities. Only one HCF meets all basic sanitation standards. Only 2 HCFs have menstrual hygiene facilities, and only four have sanitation facilities accessible to people with a disability.	2a. Construction of improved sex-separated latrines including at least one for staff, with MHM facilities and access for people with limited mobility for 3 HCFs currently without such facilities. 2b. Ensure availability of MHM facilities in at least one (1) latrine per HCF through MHM promotion and education of HCF staff in the 24 HCFs that currently do not have this. 2c. Ensure accessibility of at least one latrine for people with limited mobility through adjustment of existing facilities or construction of new appropriate ones in the 22 HCFs that currently do not have this.
	3. 16 HCFs without water or soap at point of care or within 5 m of latrine.	3a. Construction of handwashing facilities at point of care and latrines in 4 HCFs without handwashing facilities. 3b. Ensure availability of water and soap within 5 m of latrine at 12 HCFs through training and education of HCF staff and management.
	4. 2 HCFs without separate bins and 20 HCFs with some, but not all three required separate bins (for sharp, infectious, non-infectious waste).	4a. Ensure procurement and use of solid waste management facilities (for sharp, infectious and non-infectious waste) at 22 HCFs which currently do not have this fully in place. 4b. Facilitate collection and transportation of other waste from health institutions to final disposal site by private sector.
Cross-cutting	1. Reduce inequalities and exclusion in WASH delivery.	1a. Provide WASH facilities to unserved and under-served communities and institutions (schools and HCFs) to reduce inequality in access. 1b. Identify options for the provision of water facilities to hard-to-reach areas and provide or facilitate provision of water facilities.
	2. Improve systems/enabling environment for WASH.	2a. Undertake action research to generate new insights to inform WASH service delivery at all levels.

5.1.4 ENHANCING PARTNERSHIPS TO LEVERAGE RESOURCES

The ASNAN initiative is a partnership-based innovative model that seeks to leverage resources, including funds, knowledge, expertise, and technology from diverse sectors, to address pertinent WASH issues and facilitate sustainable service delivery. The ASNAN initiative will therefore enhance partnerships with national, regional and local government institutions, the private sector, civil society and development partners, traditional authorities, communities, service providers and other stakeholders working in WASH-related areas. The initiative will leverage the capacity of key partners in networking, fundraising, communication, policy advocacy, and evidence-based monitoring and evaluation (M&E), among others, to advance the WASH objectives.

5.2 RISKS AND MITIGATION

The potential risks to achieving the vision and targets of the ASNAN WASH master plan initiative have been identified, and appropriate mitigation measures put in place to reduce the risks. Table 20 presents the risks and mitigation measures.

Table 20 Anticipated risks and mitigations

SN	Nature of Risk	Levels of Risk	Mitigation Measures
	Inadequate political commitment to the implementation of the WASH Master Plan	Medium	The WASH master plan development process involved the political and technical leaders in the District Assembly in determining the priorities, strategies, and interventions. Continue to maintain engagement with the leaders and citizens to ensure the issues are prioritised for implementation.
	Inadequate financial commitment for the implementation of the WASH Master Plan	Medium	A Revenue Improvement Action Plan (RIAP) will be prepared and implemented by the Assembly to improve revenue mobilisation in the district. The Assembly will continue to engage with other development partners and NGOs to jointly implement the WASH master plan.
	Degrading quality of water resources because of illegal mining activities	Medium – High	Engage with the relevant government institutions (Water Resources Commission, Ghana Water Company Limited and the Minerals Commission etc.) to implement the actions and plans for managing water resources in the district.
	Limited capacity and staff to implement the WASH Master Plan	Medium	Assess staff capacity and organise capacity building programmes for the relevant staff (District Assembly, District Health Directorate, SHEP-GES, etc.) in the implementation of the WASH master plan.

6 PARTNERSHIPS AND IMPLEMENTATION

This section describes the roles of the various actors in the delivery of the WASH master plan. It also presents the required structures that will enable the most effective and efficient approach to ensuring the best alignment of WASH interventions.

6.1 ASUNAFO SOUTH DISTRICT ASSEMBLY ACTORS

The technical working group has provided inputs, strategic direction, and technical support for the overall development of the plan. The technical working group comprised representatives from the District Assembly (Planning, District Works Department, Finance Officer, Community Development, Environmental Health Assistant, Statistical Service), the District Health Directorate (Director, Disease Control Officers), the School Health Education Programme (SHEP) coordinators of the Ghana Education Service in the District, Ghana Water Company Limited, Rural Relief Services and IRC Ghana. Meetings with wider stakeholders in the District Assembly have provided the platform for building consensus, clarifying the roles and responsibilities and for providing updates. The Asunafo South District Assembly will lead the drive towards mobilising resources and partnerships for the implementation of the master plan.

6.2 REGIONAL AND NATIONAL GOVERNMENT ACTORS

The key national and regional institutions that will be relevant to the implementation include the following:

1. Ahafo Regional Coordinating Council – to coordinate implementation of activities of the Assembly, and provide technical backstopping, monitoring, training and harmonising of reports.
2. Community Water and Sanitation Agency (Ahafo Region) – to collaborate with the District Assembly to provide water infrastructure and services, offer technical services for the management of water facilities and provide guidelines for WASH operations.
3. Environmental Protection Agency (Ahafo regional office) – to ensure that environmental standards are adhered to for all development interventions, provide technical support and enforce policy and legislative guidelines.
4. Ghana Health Service (Ahafo regional office) - to provide technical support to the District Assembly, facilitate the School Health Programme and establish linkages with WASH.
5. School Health Education Programme (SHEP), Ghana Education Service (Ahafo regional office).
6. Water Resources Commission (Ahafo regional office) - to support the District Assembly to plan and enforce regulations in the management of water resources.
7. National Development Planning Commission to guide in aligning priorities and improving reporting, monitoring and evaluation, set medium-term development priorities, planning guidelines and report on progress of medium-term plan.
8. Office of the Head of Local Government Service – responsible for District Assemblies' human resource management and capacity support.
9. Ministry of Sanitation and Water Resources – to formulate WASH policies and strategies and uphold WASH standards at all levels.
10. Ministry of Local Government, Decentralisation and Rural Development – to provide decentralisation policy guidelines and directives, capacity building and technical backstopping to the District Assembly.
11. Ghana Health Service – to facilitate health linkage with WASH.
12. Ministry of Education – to facilitate School Health Programme.

6.3 DEVELOPMENT PARTNERS AND NGOS

Over the past five years, the district has partnered with the following NGOs and private sector companies to provide WASH services:

- Catholic Relief Services
- Cocoa buying companies
- Timber companies
- Amajaro Ghana Limited
- CRADA
- SMAid

The district will consolidate the partnership with these organisations to expand their footprint and support the implementation of the master plan.

Other Anticipated Partnerships

1. IRC, an international think-and-do tank that works with governments, NGOs, and businesses, will provide WASH system strengthening and hub support to the Assembly focusing on partnerships, planning, learning, coordination, capacity building, resource mobilisation, and monitoring.
2. Safe Water Network will work with the Assembly and communities to develop locally owned and managed safe water stations through their small water enterprises (SWEs).
3. World Vision International, a global Christian relief, development and advocacy organisation, will work with the Assembly to provide WASH services in rural communities, schools and health care facilities.
4. Aquaya Institute, a non-profit research organisation, will work with the District Assembly to promote water quality monitoring for rural water systems with the goal of contributing to sustainable water safety management practices in rural settings.
5. Netcentric Campaigns, a non-profit, will work with the District Assembly to train staff in relevant departments, design public awareness campaigns and build WASH networks of citizens to advance the delivery of WASH services.
6. SAHA Global, a non-profit organisation, will work with the District Assembly to provide simplified water treatment solutions for last mile communities.
7. Project Maji, a non-profit organisation, which is a safe water enterprise, will work the District Assembly to install and maintain solar-powered water access points and systems to provide sustainable access to safe water for most vulnerable communities.

6.4 CROSS-CUTTING PRINCIPLES FOR EFFECTIVE WASH SERVICE DELIVERY

The cross-cutting principles and actions shown in Table 21 are intended to contribute to make WASH service delivery inclusive and enhance knowledge management and learning.

Table 21 Cross-cutting principles for effective WASH implementation

National Medium-Term Policy Objectives	Principles	Intervention Areas
<p>Ensure accessible and quality Universal Health Coverage (UHC) for all.</p> <p>Promote full participation of Persons with disabilities (PWDs) in social and economic development of the country.</p>	<ul style="list-style-type: none"> Minority and marginalised populations identified and prioritised in the application of interventions. Reduce inequalities and exclusion in the delivery of WASH services. 	<ul style="list-style-type: none"> Ensure that marginalised communities are prioritised in the intervention required i.e., adequate water facility, good sanitation facility as a matter of priority. Provide boreholes with handpumps for unserved communities in remote and poor communities. Introduce inclusive designs of WASH facilities to cater for the needs of PWDs.
<p>Promote sustainable water resources development and management.</p>	<ul style="list-style-type: none"> Monitor mining and logging activities to ensure they are undertaken in an environmentally sustainable manner. 	<ul style="list-style-type: none"> Education and awareness creation of the impact of illegal mining on water resources to enhance self-regulation. Strengthen involvement of local communities in the management of water resources, forests and wetlands
<p>Ensure responsive governance and citizen participation in the development dialogue.</p>	<ul style="list-style-type: none"> Promote effective stakeholder involvement in planning, public awareness, outreach, monitoring, and accountability. 	<ul style="list-style-type: none"> Strengthen the sub-district assembly structures such as the assembly members, zonal councils, to enhance citizen participation and support for effective WASH delivery. Organise radio discussions on the master plan and the related projects and programmes. Utilise all communications channels available within the district to engage constituents in WASH activities and create feedback mechanisms between the government and citizens. Organise town hall meetings and community durbars to engage communities in the master plan and the related projects and programmes.
<p>Strengthen plan preparation, implementation, and coordination at all levels.</p> <p>Integrate WASH into health programming at all levels.</p>	<ul style="list-style-type: none"> Strengthen monitoring and evaluation systems. Reinforce the institutional arrangements with adequate capacity to support and sustain effective monitoring and evaluation. Enhance efficiency and performance at all levels. 	<ul style="list-style-type: none"> Organise routine monitoring and evaluation of the plan, related Assembly projects and programmes. Enhance the capacity, skills, logistics and knowledge of the staff to provide technical leadership, education and coordination of WASH activities. Harmonise institutional mandates and responsibilities for WASH activities in the district.
<p>Strengthen fiscal decentralisation.</p>	<ul style="list-style-type: none"> Promote evidence-based decision-making at all levels. Strengthen capacity for data management and surveillance. 	<ul style="list-style-type: none"> Broaden the WASH team in the district to include other departments with shared goals. Share information on WASH to stakeholders for evidence-based decision-making. Develop a systemic methodology to track, analyse and communicate on WASH services.

7 COMMUNICATION, ADVOCACY AND NETWORKS

The Communication, Advocacy and Network Strategy is a critical component of the WASH master plan for the Asunafo South District Assembly. The activities aim to create awareness of the master plan and engage local actors in improved WASH-related behaviours and attitudes. This section outlines the communication and advocacy strategy necessary for success and the key messages for behaviour change.

7.1 MASTER PLAN COMMUNICATIONS

This section sets out a communication and advocacy strategy for the master plan. The Asunafo South District Assembly has put in place measures to disseminate its plans and development strategies to the public to promote their participation and perspectives. The purpose of the communication, advocacy and networks plan is to document and share planned achievements, lessons learnt, and best practices to inform policy review and replication.

The dissemination of the master plan will be through the MDTP communication plan and processes. As indicated in the district medium-term plan, the community outreach will involve public hearings, meetings with political leadership, popular participation (via community durbars and town hall meetings) etc.

The social and behaviour change communications will aim to stimulate social transformation and change in behaviour and attitudes towards WASH. The communication aspect of the plan will focus on building awareness, targeting advocacy activities, and engaging local actors in improved WASH-related behaviours and attitudes. The key activities that will be undertaken to achieve the communication objectives include:

1. Raise awareness of the WASH master plan to create the needed critical mass for support and to build synergies with key stakeholders. The outreach in communities will involve awareness campaigns, public meetings, community durbars and town hall meetings.
2. Promote institutional partnerships for managing the implementation of the master plan.
3. Publicise the master plan strategic activities and events through the local media and share it with wider sector stakeholders.
4. Undertake stakeholder engagements to influence behaviour change towards WASH in the district.
5. Enhance and support the development of the capacity of civil society partners to advance all aspects of the WASH master plan.
6. Engage in, and demand through advocacy, key reforms and accountability practices within the district.

7.1.1 TARGET AUDIENCES

The primary audiences are at the core of the communication plan while secondary audiences help bridge certain gaps and extend the outreach scale as is shown in Table 22.

Table 22 Audience analysis for communication

Primary audiences	Secondary audiences
District Chief Executive	Ghana Health Service
Heads of Department and Agencies in the District Assembly	Ahafo Regional Coordinating Council
Assembly Members	School Health and Education Programme of the Ghana Education Service (SHEP-GES)
Traditional Leaders	Water Resources Commission
Community members	Community Water and Sanitation Agency
Representatives of Zonal Councils and other Opinion Leaders	National Development Planning Commission
Market Queens and Business Associations	Ministry of Local Government and Rural Development
Artisans, Mechanics	Ministry of Sanitation and Water Resources
Ghana Private Road Transport Union (GPRTU) etc.	
Faith-Based Organisations (FBOs)	
Civil Society Organisations	Local NGOs within the district
Development Partners (NGOs)	
Local Media	Local FM Stations
	Agriculture sector especially farmers and cooperatives

The WASH master plan implementation process will make use of a variety of channels to ensure engagement with all relevant audiences. The dissemination techniques include:

- a) Announcements, discussions, and broadcasts in the local news media e.g., local FM and TV stations, local newspapers, and Assembly’s website, WhatsApp groups, other social media channels, and newsletters
- b) Use of the District Assembly’s information van to deliver campaigns in hard-to-reach areas.
- c) Use District Assembly’s communication with constituents to regularly promote WASH (e.g., bills generated by the Assembly or permits and inspections for buildings and health check-ups).
- d) Disseminate information, campaigns and recruit WASH network members through the District’s Community Information Centres.
- e) Meetings with traditional authorities, representatives of Zonal Councils and other opinion leaders and tasking them to take the messages back to their communities.
- f) Holding community meetings at central locations throughout the district.

The dissemination channels that will be used throughout the implementation of the master plan include:

- a) Face-to-face
- b) Radio
- c) Website
- d) Social media (Facebook, Twitter, WhatsApp groups, etc.)
- e) Video and television (TV) newspapers
- f) Community durbars
- g) Town Hall meetings
- h) National government WASH awareness campaigns
- i) Public Relations and Complaints Committee
- j) Client Services, Public Information, Education, Environmental Health, Planning, Public Works, Social Welfare and Community Development departments and others as appropriate

It will be important to develop effective feedback mechanisms for providing feedback to the Assembly so that lessons learnt can be applied to planning and decision making.

7.2 WASH ADVOCACY AND NETWORKS

This section sets out a communication, network building, and advocacy strategy necessary for the success of the WASH master plan. Communication and advocacy are essential to advance the culture shift necessary and improve public participation and management for the broader WASH systems planned by the master plan to run well and achieve the social, health and economic benefits.

The social and behaviour change communications will aim to stimulate social transformation and change in behaviour and attitudes towards WASH, including financial and other related accountability issues. Organising and building networks will engage the public and others in the working relationships needed to support success.

Activities will be based on key advocacy themes related to WASH (water, sanitation, and hygiene). These themes are:

- **Equity and inclusion in WASH delivery:** This theme emphasises the importance of ensuring that WASH services are accessible to all individuals, regardless of their socio-economic status, gender, age, ethnicity, or other factors. It aims to promote equity and inclusion in the delivery of WASH services and address inequalities that may exist in accessing these services.
- **Payment of tariffs for WASH services:** This theme highlights the need for individuals and communities to pay for WASH services in order to ensure their sustainability and effectiveness. It aims to address issues related to non-payment or underpayment of WASH services, which can lead to a lack of investment in these services and ultimately their failure.
- **Individual responsibility and accountability of citizens:** This theme emphasises the role that citizens need to engage in to keep water and WASH infrastructure functional, report leaks, stop indiscriminate dumping of waste, monitor poor environmental sanitation (stagnant water, pollution, runoffs, etc.). Emphasise the responsibility of citizens to monitor and report aberrations to keep the WASH systems in good order.
- **Funding and prioritisation of WASH service delivery by local and national government:** This theme emphasises the importance of government investment in WASH services, particularly at the local and national levels. It aims to promote the prioritisation of WASH service delivery in government budgets and the allocation of sufficient funding to ensure the provision of high-quality WASH services.
- **Business opportunities in WASH and active private sector participation:** This theme focuses on the potential for the private sector to play a significant role in the delivery of WASH services, particularly in terms of innovation, financing, and service provision. It aims to encourage private sector engagement and investment in the WASH sector, while also ensuring that these efforts are aligned with public sector priorities and goals.
- **Behaviours and attitudes towards WASH:** This theme addresses the need to promote positive attitudes and behaviours related to WASH, particularly in terms of hygiene practices and water conservation. It aims to increase awareness and understanding of the importance of WASH and encourage individuals and communities to adopt behaviours that promote WASH sustainability.
- **Financial accountability of duty bearers and rights holders:** This theme emphasises the importance of financial accountability and transparency in the delivery of WASH services. It aims to ensure that duty bearers (e.g., governments, service providers) and rights holders (e.g., communities, individuals) are held accountable for their financial contributions and that funds are used effectively and efficiently to deliver high-quality WASH services.

The key activities that will be undertaken to achieve the communication objectives include:

- Engage with stakeholders to influence behaviour change towards WASH across the district.
- Engage and support the development of the capacity of civil society partners to advance all aspects of the WASH master plan.
- Engage in and demand through advocacy, key reforms and accountability practices within the district.
- Build direct and long-term regular engagement with local stakeholders such as community leaders, civil society organisations, and government agencies.
- Create offers of value for participants, such as opportunities to learn best practices, capacity building, learning and sharing of new ideas, becoming agents of change, enhanced information sharing, problem-solving skills,

employment credentials, teambuilding skills, enhanced decision-making skills, knowledge acquisition, confidence building, as well as offering participants joint ownership of the best results and prestige for being part of the efforts.

- Coordinate and create a two-way dialogue between the users of the WASH services and the administration. Promote transparent and accountable governance to build public trust and confidence in the government's commitment to improving WASH services.
- Collect feedback from stakeholders on the effectiveness of the communication, communications channels and tools used. Improve public awareness and involvement in the WASH initiative.

7.2.1 TARGET AUDIENCES

The primary audiences are at the core of the WASH advocacy and networking efforts while secondary audiences will help to bridge certain gaps and extend the outreach scale, as shown in Table 23 below.

Table 23 Audience analysis for advocacy

Primary audiences	Secondary audiences
Beneficiary committees	Contractors
Assembly Members	School Health and Education Programme of the Ghana Education Service (SHEP-GES)
Traditional Leaders	Heads of Departments and Agencies in the District Assembly – Focus on Client Services, Public Information and Environmental Health Officers.
Community members	Community Water and Sanitation Agency
Representatives of Zonal Councils and other Opinion Leaders	Gaming and Betting Enablers
Market Queens	Business Associations
Artisans, Mechanics	Ministry of Sanitation and Water Resources
Ghana Private Road Transport Union (GPRTU) etc.	Faith-Based Organisations (FBOs)
Public Relations and Complaints Committee of the Assembly	Owners of Community Information Centres
Civil Society Organisations	Local NGOs within the district
Development Partners (NGOs)	
Local Media	Local FM Stations
Former legislative leaders	Political organisations
Cocoa Growers Association	Security agencies
Farmers Association	Prison inmates
Faith leaders	

The implementation process will make use of a variety of channels to ensure engagement with all relevant audiences. The dissemination techniques include:

- a) Announcements, discussions, and broadcasts in local news media, e.g., local FM station, local newspapers, and Assembly's website, social media, and newsletters.
- b) Meeting with traditional leaders, representatives of Zonal Councils and other opinion leaders and tasking them to take the messages back to their communities.
- c) Holding community meetings at central locations throughout the district.

The dissemination channels that will be used throughout the implementation of the master plan include:

- a) Face-to-face meetings
- b) Radio
- c) Websites
- d) District and other WhatsApp groups
- e) Routine SMSs
- f) Toll free numbers
- g) Community Information Centres
- h) District Assembly Meetings
- i) Social media (Facebook, Twitter etc.)
- j) Video and television (TV) newspapers
- k) Community durbars
- l) Town Hall meetings
- m) District information vans

7.3 KEY MESSAGES AND THEMES

There will be specific messages tailored to each target audience. For the stakeholders in the Asunafo South District Assembly, the messages developed will aim to promote active participation and accountability, and garner support from stakeholders for local development interventions. The intervention areas and the focus of the messages are listed in Table 24.

Table 24 Social Behaviour Change Communication (SBCC) messages for WASH interventions

Intervention Area	Key Behaviour Change Messages
Personal Hygiene (Handwashing with soap under running water)	<p>Always wash hands with soap and clean water, at least for 20 seconds frequently, especially at critical times:</p> <ol style="list-style-type: none"> 1. Before preparing, serving food and eating. 2. Before feeding babies/before breastfeeding, before feeding little children. 3. After latrine use, also after disposing of little children's faeces. 4. After handling animals or animal waste (i.e., slaughtering a chicken), be sure to wash your hands before and after dealing with raw meat. 5. Wash your dishes with clean water and soap.
Safe Handling and Storing of Drinking Water	<p><i>Keep drinking water safe:</i></p> <ol style="list-style-type: none"> 1. Keep all water sources free from contamination. 2. Collect water in a clean and safe container. 3. Wash your hands after having collected water once you reach home. 4. Keep water drawing and storage containers clean and covered. 5. Use a clean glass/ cup when drinking water. <p><i>If the water is dirty, there are some options to clean this water:</i></p> <ol style="list-style-type: none"> 1. Pour the settled water carefully through a filter (for example, a clean cloth) into a clean container. Make sure the settled dirt does not pour out. 2. After pouring the water through the cloth, boil or treat it. 3. Drinking water can also be made safe by purifying it with chlorine tablets. Follow the instructions on the packet by putting the purifying tablet into the water, and then it will be safe for drinking.

Intervention Area	Key Behaviour Change Messages
Ensure a Safe and Hygienic Environment	<p><i>Keep your home and surrounding environment clean:</i></p> <ol style="list-style-type: none"> 1. All faeces, including those of babies and young children, should be disposed of in a latrine. Where there are no latrines, faeces should be buried. 2. Always cover your pit latrine after use. 3. Properly dispose of the rubbish in a pit /designated disposal site. 4. Avoid keeping animals in the house. Provide separate accommodation for animals. 5. Manage drains and toilets, including leakages of septic tanks, to minimise the risk of a continuously contaminated environment. 6. Manage environmental situations such as uncovered water containers, open drains and septic tanks, water puddles or solid waste – which leads to an increase in mosquito breeding (STH, SCH). 7. Encourage larvae control, including insecticide treatment of larvae breeding sites (oncho).
ODF	<ol style="list-style-type: none"> 1. Always use a latrine. 2. Always cover your pit latrine after use. 3. Throw all faeces, including baby’s faeces, into a pit latrine. 4. Do not defecate in the open at any time.
Menstrual Hygiene	<ol style="list-style-type: none"> 1. Do not throw away used pads in the open. 2. Put any used pads into a refuse container.
Hygiene in School	<ol style="list-style-type: none"> 1. All school children must wash their hands thoroughly with soap and clean water after any contact with faeces, before touching, preparing or serving food, and before eating food. 2. Washing face and hands with soap and clean water every day helps to prevent eye infections which can lead to trachoma, which can cause blindness. 3. Keep and maintain a safe and clean environment throughout the school.

8 MONITORING, EVALUATION AND LEARNING

This section presents the framework for monitoring, evaluation, and learning. It is based on the projections, strategic actions, and targets mentioned in the plan and how they will be measured.

8.1 MONITORING FRAMEWORK

Monitoring the master plan will be a continuous and integral part of the District Assembly's functions and plan implementation. Monitoring will facilitate tracking progress in implementation and effectiveness and identifying bottlenecks for timely resolution. It is expected that the monitoring findings will feed into the meetings of stakeholders and partners organised by the district to take stock of progress and to help in re-planning for maximum results. It will also provide information for preparing the annual progress report to the NDPC. Two rounds of evaluation will be conducted at midterm and at the end of the project. A midterm evaluation will be conducted in 2026 to assess whether the resources invested in project interventions have produced or are producing the desired results in terms of outputs and benefits and whether the benefits are reaching the intended target population/community.

The monitoring framework for the WASH master plan has been aligned with national policy objectives and indicators. Additional indicators have been included to provide further details to ensure effective monitoring of programmes and projects. Table 25 shows the policy objectives, indicators, monitoring frequency and who is responsible, focusing on key thematic areas.

Table 25 Monitoring and evaluation framework

Focus Area	National policy objective	Indicators for measurement	Monitoring Frequency	Responsibility
Water services	Improve access to safe and reliable water supply services for all	<ul style="list-style-type: none"> Proportion of population with access to safely managed drinking water Proportion of population with access to basic drinking water 	Annually	District Planning and Coordination Unit / District Environmental Health Unit
Sanitation and hygiene services	Enhance access to improved and reliable environmental sanitation services	<ul style="list-style-type: none"> Proportion of population with access to basic sanitation services Proportion of population practising open defecation (number of communities achieving open defecation-free (ODF) status) Proportion of population with access to handwashing facility with soap and water Proportion of solid waste properly disposed of (major towns/cities) Proportion of population whose liquid waste (faecal matter) is safely managed 	Annually	District Planning and Coordination Unit / District Environmental Health Unit
WASH in Schools	Enhance inclusive and equitable access to, and participation in quality education at all levels	<ul style="list-style-type: none"> Proportion of schools with access to basic WASH services 	Annually	District Planning and Coordination Unit/ School Health Education Programme- Ghana Education Service

Focus Area	National policy objective	Indicators for measurement	Monitoring Frequency	Responsibility
WASH in Health Care Facilities	Ensure accessible and quality Universal Health Coverage (UHC) for all	<ul style="list-style-type: none"> Proportion of health care facilities with access to basic WASH services 	Annually	Health Directorate/ District Planning and Coordination Unit

8.2 REPORTING

It is expected that the monitoring findings will feed into the meetings of stakeholders and partners organised by the district to take stock of progress and to help in re-planning for maximum results. It will also provide information for preparing the annual progress report to the NDPC, Regional Coordinating Council and the Ministry of Sanitation and Water Resources (MSWR) highlighting progress in the implementation of the WASH master plan to be shared with development partners, NGOs and other stakeholders.

8.3 EVALUATION

Evaluation will be carried out purposely to assess whether the resources invested in a particular project have produced or are producing the desired results in terms of outputs and benefits and whether the benefits are reaching the intended target population/community within the district. Scheduled mid-term evaluations will be carried out at the end of each planning cycle of four (4) years, in line with the duration of the medium-term plan of the district. The feedback will be used to inform the planning for the next four (4) years. The endline evaluation will examine the overall impact of the master plan in contributing to the WASH goals and SDG 6.

8.4 KNOWLEDGE MANAGEMENT AND LEARNING

Learning will be part of the implementation phase of the master plan. This will involve the documentation and sharing of lessons, best practices, and new insights. The sharing will be done using existing platforms:

- Stakeholder meetings to coordinate and review the implementation of the WASH master plan.
- Town Hall meetings to discuss and generate feedback on performance of the implementation of the WASH master plan.
- Other regional and sector events.
- Print and electronic media: District Assembly's website and social media.

9 COSTING OF THE MASTER PLAN AND SOURCES OF FUNDING

This chapter focuses on the cost estimates required to cover the infrastructure and recurrent costs to provide universal access to WASH services in the district. The cost estimates presented here are intended to support more detailed prioritisation and budgeting.

The costing approach considers the existing and projected population, technology, strategies, and interventions for WASH service delivery and the costs for sustaining these services. The cost estimates are based on inputs from the District Assembly. The estimates include elements of the life-cycle costs approach, including:

- Capital expenditure (CapEx) - the cost for providing the WASH infrastructure.
- Capital maintenance expenditure (CapManEx) - the cost of replacing assets or asset renewal. This covers major maintenance activities.
- Operational and maintenance expenditure (OpEx) - the cost of routine operations and minor maintenance.
- Expenditure on direct support (ExpDS) - the cost for supporting service delivery, which includes monitoring and evaluation, technical support, backstopping, capacity building etc.

This section presents the expected sources of funding for the different cost components, based on the three Ts: Taxes from government, Transfers from development partners and philanthropists, and Tariffs from water and sanitation service users. It also presents actions that need to be taken in order to ensure that costs are sufficiently covered by these sources of funding.

This section focuses on the costs related to ensuring sustainable water and sanitation service provision to all by 2030, in line with the set vision. It does not include costing and sources of funding for WASH in schools and health care facilities.

The costing presented in this section focuses on the costing of the strategic directions related to “Facility and service coverage expansion” and related to ensuring sustainable water and sanitation service provision. It does not cover the costs required to strengthen local and district level systems (which are considered indirect support costs), accountability and enforcement promotion and enhancing partnerships to leverage resources. It also does not cover costs for strengthening of the enabling environment and capacity for WASH.

9.1 WATER SERVICES

9.1.1 COSTING

In order to estimate the life-cycle costs related to water service provision in line with the master plan, assumptions were made on unit costs per facility as presented in Table 26.

Table 26 Costing assumptions (in USD)

	CapEx (UDS)	Expected lifespan	Expected number of people served	CapManEx (one-off)	CapManEx (USD per year)	OpEx (USD per Year)
Costs of construction of additional facilities						
Town piped scheme	500,000	20			25,000	50,000
Small community piped scheme	100,000	20			5,000	10,000
Household connection	1,000	20	5		50	
Additional Piped Scheme standpipe	1,000	20	300		50	
Limited Mechanised Boreholes	20,000	20			1,000	500
Additional Limited Mechanised Borehole Standpipes	1,000	20	300		50	
Borehole with handpumps	7,000	20	300		350	120
Costs of handpump repairs (for currently broken-down boreholes)						
Handpump installation on existing borehole				500		
Handpump repair				100		
Complete rehabilitation				1200		

Table 27 presents the number of facilities that are to be constructed and rehabilitated as per the master plan.

Table 27 Number of facilities to be constructed and currently broken-down facilities to be rehabilitated

	2023	2024	2025	2026	2027	2028	2029	2030	Total facilities
Additional facilities to be constructed									
Additional Town piped schemes	0	0	0	0	0	0	0	0	0
Additional Small community piped schemes	2	0	0	0	0	0	0	0	2
Additional number of household connections	281	281	281	281	281	281	281	281	2248
Additional Piped Scheme standpipes	14	0	0	0	0	0	0	0	14
Additional Limited Mechanised Boreholes	19	0	2	0	0	0	0	0	21
Additional Limited Mechanised Boreholes Standpipe	40	0	4	0	3	0	0	2	49
Additional Handpumps to be constructed	5	4	8	8	10	5	6	4	50
Currently broken-down facilities to be rehabilitated									
Handpump installation on existing borehole	0	1	2						
Handpump repair	4	3	23						
Complete rehabilitation	3	3	30						

Table 28 provides the total life-cycle costs related to provision of universal sustainable water services in line with the master plan (100% of the population with at least basic services) by 2030. The costs have been estimated considering the current service coverage, the targeted coverage, and the unit cost of the technologies to be used to achieve the target.

Table 28 Cost estimates for water service delivery

	2023	2024	2025	2026	2027	2028	2029	2030	Total (2023-2030)	Average per person per year (2022-2030)
CapEx	718,013	59,516	139,978	94,655	117,203	75,345	86,214	73,599	1,364,524	1.60
CapManEx	284,898	297,954	371,309	341,367	355,665	368,425	382,060	395,296	2,796,973	3.20
OpEx	257,212	266,328	283,672	293,263	303,452	313,272	323,555	333,870	2,374,623	2.72
Direct support costs	103,709	105,167	106,634	108,125	109,629	111,151	112,699	114,269	871,383	1.00
Total	1,363,832	728,966	901,593	837,410	885,948	868,192	904,529	917,034	7,407,503	8.53

Figure 17 gives an overview of the required life-cycle costs and the resulting changes in service levels over the master plan period.

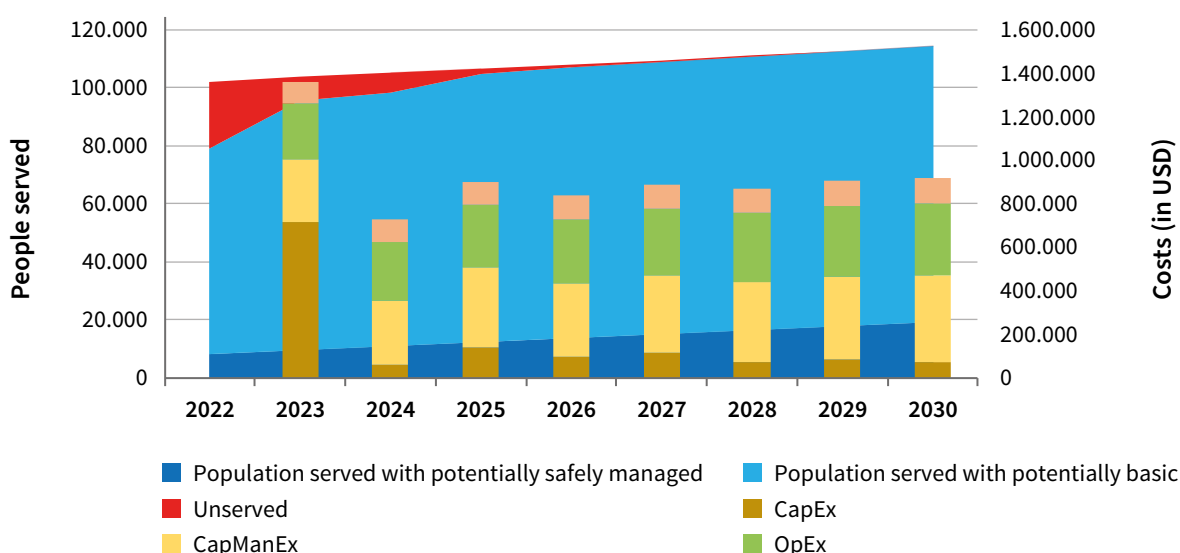


Figure 17 Costs and water service level projections

9.1.2 SOURCES OF FUNDING AND FINANCING

CapEx is mainly covered by (local) government and its partners through taxes and transfers. **Ensuring these funds are made available will require the development of funding proposals by local (or regional) government for consideration by development partners and government programmes.**

Water users themselves contribute through connection fees and contributions to capital investments. Household connection fees paid by water users are assumed to cover the costs of additional CapEx related to construction of household connections. **Management of piped schemes (WSMTs, CWSA, GWCL) need to promote and facilitate household connections and payment of household connection fees.**

The operation and minor maintenance costs related to water service provision will need to be funded by water users themselves, through payment of water tariffs. Revenues are collected for both the Kukuom and Sankore piped schemes. The Kukuom and Sankore piped schemes reported revenues amount to 251,498 GHC and 110,386 GHC respectively, and expenditure amounting to 247,476 GHC and 113,790 GHC, respectively. Part of the revenues are supposed to be set aside to cover capital expenditure related to capital maintenance and expansion. However, operational surplus for both schemes was shown to be small, which makes covering future costs of expansion

(CapEx) and major repairs, rehabilitation and renewal (CapManEx) through revenues unlikely. Therefore, **CapManEx related to piped schemes will likely need to be covered to a considerable extent by (local) government and its partners through taxes and transfers.**

Of the 11 handpump WSMTs that were able to provide data on annual revenues, the reported revenues varied widely, from 400 GHC to 2,900 GHC per year, with an average of about 1,400 GHC per year, which was more or less in line with the 120 USD required for OpEx (using exchange rates at the time of data collection). However, currently, only 15% of the 181 (unabandoned) handpumps have payment structures from users in place. **In order to ensure coverage of the required expenditure on operation and minor maintenance, there is thus a need for strengthening local systems for setting up handpump tariffs and revenue collection.**

As asset holder of handpumps on boreholes, **local government is responsible for CapManEx of handpumps.** In order to take up this role, it needs to have asset management systems in place, in order to plan for and ensure funding for asset repairs, rehabilitation and replacement over time.

Table 29 below presents an overview of the expected sources of funding. It shows that overall, taxes and transfers are expected to cover the majority of costs, but that also a considerable part of the costs (36%) are to be paid for by users through tariffs.

Table 29 Sources of funding

Sources of funding	Expected amount covered (USD)	% of total
Taxes and transfers	3,904,126	53%
Taxes	871,383	12%
Tariffs (household connection fees)	257,371	3%
Tariffs (payment for water services)	2,374,623	32%

Figure 18 below presents the total costs for ensuring sustainable water service provision for all by 2030, with the expected sources of funding.

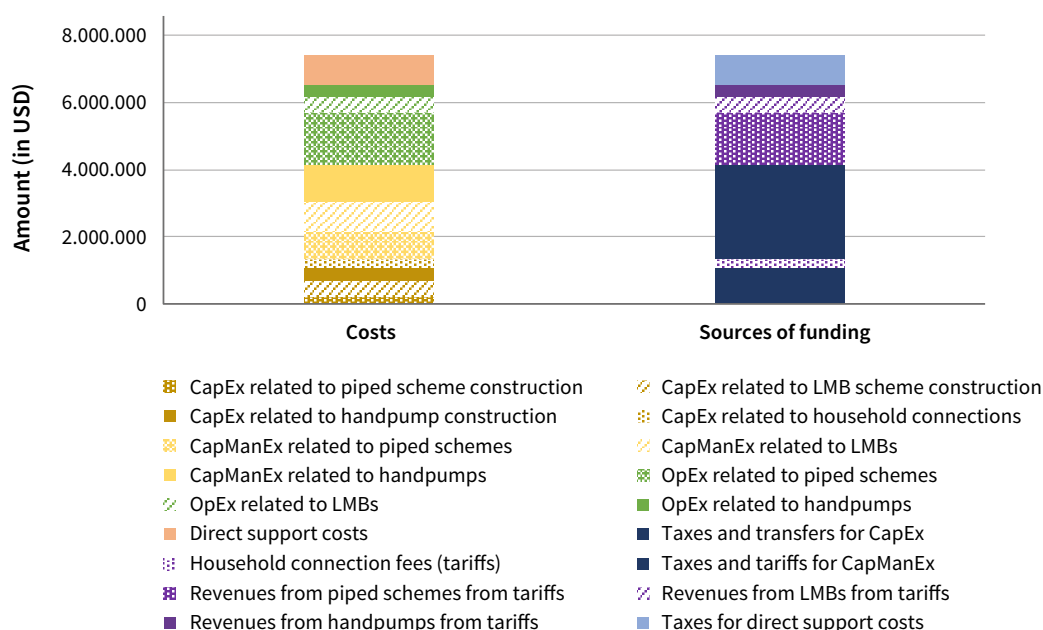


Figure 18 Total costs and sources of funding for sustainable water service provision

9.2 SANITATION SERVICES

9.2.1 COSTING

A breakdown of the estimated cost required to achieve the sanitation targets is provided in Table 30.

Table 30 Cost estimates for sanitation service delivery

Year	2023	2024	2025	2026	2027	2028	2029	2030	Total (2023-2030)	Total per person per year
CapEx	461,170	473,950	487,090	500,230	377,050	387,600	398,270	408,450	3,493,810	4
CapManEx and OpEx	494,950	687,900	886,200	1,089,850	1,228,500	1,370,950	1,517,350	1,667,300	8,943,000	11
ExpDS	92,977	94,278	95,598	96,937	98,294	99,670	101,065	102,480	781,299	1
Total	1,049,097	1,256,128	1,468,888	1,687,017	1,703,844	1,858,220	2,016,685	2,178,230	13,218,109	17

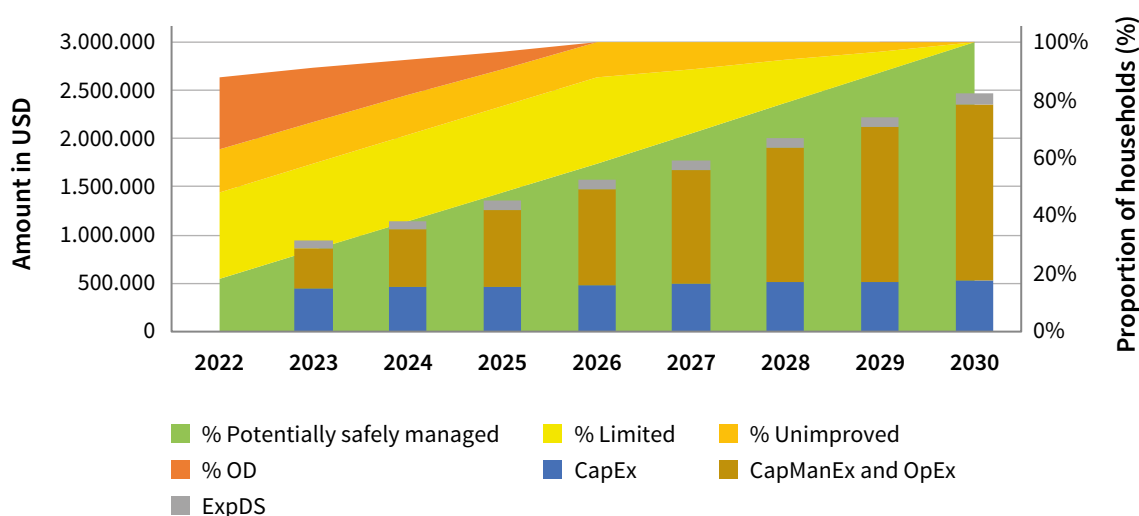


Figure 19 Costs and sanitation service level projections

9.2.2 SOURCES OF FUNDING

The CapEx consists of a hardware part, which should be covered by households themselves (“tariffs”) and a software part, activities of local government and its partners to stimulate demand for latrine facilities and facilitate construction of facilities by households. These software activities need to be covered by local government and its partners through taxes and transfers.

CapManEx and OpEx are to be paid for by households, either through their expenditure on CapManEx and OpEx for their own facilities, or through payment of tariffs for use of public toilets.

Direct support costs (ExpDS) are to be covered by local government through taxes.

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