

# **WATER, SANITATION AND HYGIENE (WASH) MASTER PLAN**

September 2023

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**Editor:** IRC

**Design and layout:** Punt Grafisch Ontwerp, Utrecht, The Netherlands

**Cite this publication as follows:**

Asunafo North Municipal Assembly, 2023. Water, Sanitation and Hygiene (WASH) Master Plan, Goaso - Ghana

# WATER, SANITATION AND HYGIENE (WASH) MASTER PLAN

**Asunafo North Municipal Assembly**  
September 2023



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# ACRONYMS AND ABBREVIATIONS

<b>BM</b>	Benchmark
<b>CHOs</b>	Community Health Officers
<b>CHPS</b>	Community Health Planning and Services
<b>CWSA</b>	Community Water and Sanitation Agency
<b>DACF</b>	District Assemblies Common Fund
<b>DEHU</b>	District Environmental Health Unit
<b>DESSAP</b>	District Environmental Sanitation Strategy and Action Plan
<b>DPCU</b>	District Planning and Coordinating Unit
<b>DPP</b>	Dual Path Platform
<b>EHSD</b>	Environmental Health and Sanitation Directorate
<b>ESP</b>	Environmental Sanitation Policy
<b>GES</b>	Ghana Education Service
<b>GHS</b>	Ghana Health Service
<b>GWCL</b>	Ghana Water Company Limited
<b>G2D</b>	Grade 2 Disabilities
<b>HCF</b>	Health Care Facility
<b>JMP</b>	Joint Monitoring Programme
<b>MDTP</b>	Medium-Term Development Plan
<b>MDAs</b>	Metropolitan, Municipal and District Assemblies
<b>MSWR</b>	Ministry of Sanitation and Water Resources
<b>MB</b>	Multibacillary
<b>MHD</b>	Municipal Health Directorate
<b>NMTDPF</b>	National Medium-Term Development Policy Framework
<b>NTDs</b>	Neglected Tropical Diseases
<b>NTDP</b>	Neglected Tropical Diseases Programme
<b>NWP</b>	National Water Policy
<b>OPD</b>	Outpatient Department
<b>PCR</b>	Polymerase Chain Reaction
<b>PHC</b>	Population and Housing Census
<b>RDT</b>	Rapid Diagnostic Testing
<b>SDM</b>	Service Delivery Model
<b>SHEP</b>	School Health Education Programme
<b>SDGs</b>	Sustainable Development Goals
<b>WRC</b>	Water Resources Commission
<b>WSMT</b>	Water and Sanitation Management Team
<b>WASH</b>	Water, Sanitation, and Hygiene
<b>WHO</b>	World Health Organization



# ACKNOWLEDGEMENT

The Asunafo North Municipal Assembly wishes to acknowledge all persons, institutions and development partners (local, national and international) who supported in diverse ways to the development of the Asunafo North Ahonidie, Nsupa, Asetenapa Dwumadie (ANANAD) Initiative Water, Sanitation and Hygiene (WASH) Master Plan.

First and foremost, we appreciate the financial support of the Conrad N. Hilton Foundation to the preparation of the Master Plan.

We appreciate greatly the leadership role IRC played in rallying efforts of other local, national and international development partners during the plan preparation process. We also commend the technical backstopping of staff of IRC throughout the development of this plan.

Our sincere gratitude goes to all private development partners who were involved in the development of this document. We commend especially Aquaya Institute, Safe Water Network, World Vision International and Netcentric Campaigns for their technical inputs.

We are also thankful to the National Development Planning Commission, Ministry of Sanitation and Water Resources, Office of the Head of Local Government Service, Community Water and Sanitation Agency and the Ahafo Regional Coordinating Council (especially the Regional Planning Co-ordinating Unit) for their technical guidance in producing a standard plan that aligns with national and international policy goals, objectives and strategies.

Lastly, we are grateful to our Traditional Authorities, Assembly Members, the Municipal Chief Executive and the Municipal Co-ordinating Director for their leadership and commitment to the entire process. We also commend the Head of Departments of the Assembly and Civil Society Organisations and community members for participating and contributing to the development of the plan and interest in the development of the master plan. Special thanks go to the Municipal Planning Officer and staff of the Planning Unit for facilitating and coordinating activities as well as serving as the secretariate during the plan preparation process.



Photo: Government shows leadership with traditional and partner support

# PREFACE

The Asunafo North Ahonidie, Nsupa, Asetenapa, Dwumadie (ANANAD) initiative is a Water, Sanitation and Hygiene (WASH) Master Plan that aims to address the current pressing water, sanitation and hygiene challenges, and unlock the immense potential of water resources, sanitation systems, and hygiene practices in communities, schools and health care facilities in the Asunafo North Municipality.

Currently, 36% of the population in Asunafo North Municipality do not have access to water. Fifty-five (55) percent of the population have access to basic water services. Only 3% of the population have access to safely managed water services. Around 38% of the population still practice open defecation, 20% have access to limited sanitation services, while only 25% have access to safely managed sanitation services. In both cases, the situation is worse in the rural areas with women and children being the most affected. As high as 60.1%, 37% and 29% of public schools in the municipality do not have access to water, sanitation and hygiene services respectively. Five (5) percent of health care facilities do not have access to water services, while two (2) percent do not have access to sanitation and hygiene services.

Water, sanitation and hygiene form the backbone of sustainable development, impacting every facet of human life, health, and well-being. As we face growing population pressures, urbanisation, climate change and resource scarcity, it is imperative that we adopt a strategic and integrated approach to providing and sustainably managing equitable access to safe water, sanitation facilities as mandated by the Local Governance Act of 2016 (Act 936).

The ANANAD WASH Master Plan goes beyond short-term fixes and conventional approaches. It encapsulates a holistic and integrated framework that combines policy reforms, infrastructure development, behavioural change campaigns and engagements with development partners, Traditional Authorities, communities, schools and health care facilities. By integrating these elements, it is aimed to create a synergy that will not only improve sustainable access to potable water and sanitation services, but also foster a culture of sustainable hygiene practices in the municipality.

We believe strongly that the WASH master plan presents a transformative opportunity to address existing disparities in access to potable water, improve public health outcomes, enhance environmental sustainability and foster inclusive economic development as it responds adequately to both regional and global development commitments of Ghana.

It is our fervent hope to harness the potentials of the municipality and build partnerships with local, national and international development players in the WASH Sector for the successful implementation of this 7-year master plan.

We believe together, we can drive the change needed to meeting SDG 6 in the Asunafo North municipality whereby all citizens would have access to sustainably managed water, sanitation and hygiene services by 2030, which are fundamental to a better human life and productivity.



**HON. YAW OSEI-BOAHEN**  
MUNICIPAL CHIEF EXECUTIVE

# 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 North Municipal Assembly and its major development partners and stakeholders developed this 7-year (2023-2030) WASH master plan termed Asunafo North Ahonidie, Nsupa, Asetenapa Dwumadie initiative (ANANAD initiative).

The Asunafo North Municipal is among the six (6) districts within the Ahafo Region. It has a total population of 150,198 (PHC 2021), with Goaso as the Municipal Capital and the Ahafo regional capital Mim is the most populated town in the municipality.

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 municipality.

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

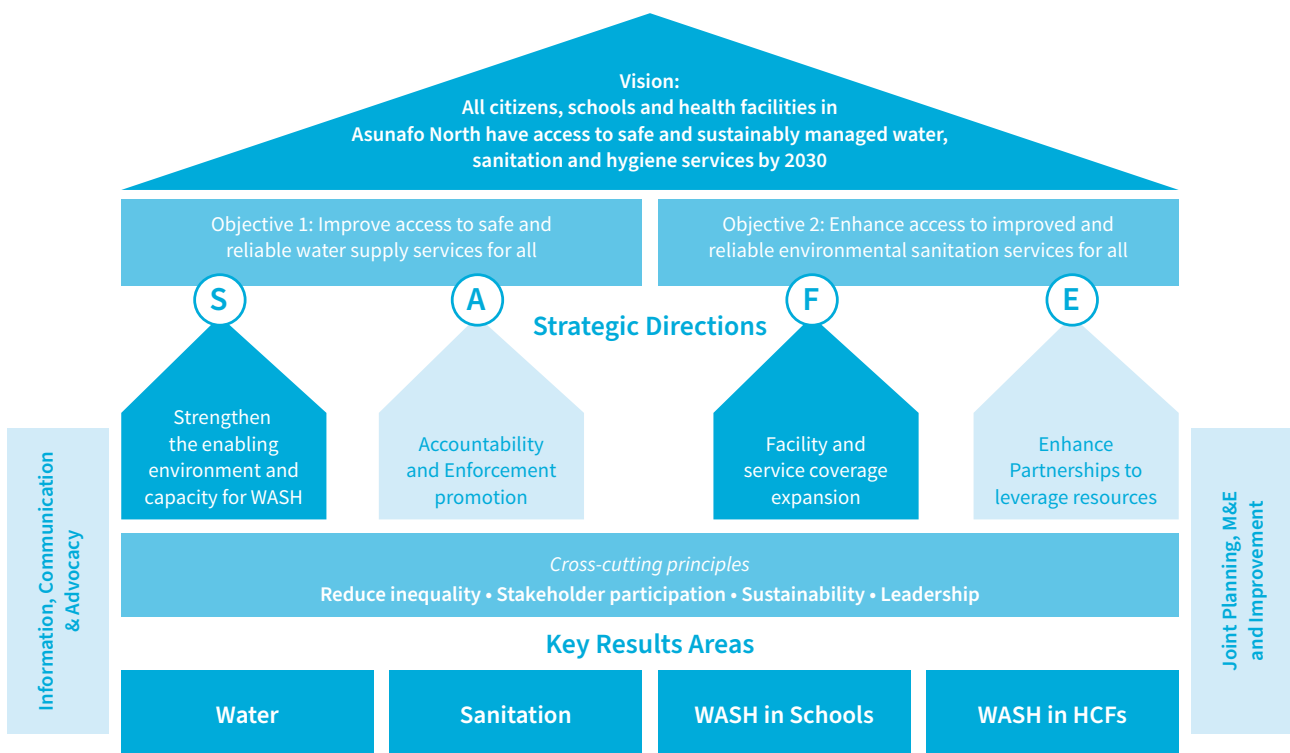


Photo: Stakeholder interactions at the launch of the district-wide approach replication in Ahafo

The ANANAD WASH master plan initiative envisions universal access to safe and sustainably managed water, sanitation and hygiene services by 2030. The water service target is to increase the proportion of the population with access to safely managed water from 3% in 2022 to 35% by 2030. In addition, increase access to at least basic water services from 55% to 65% by the end of 2030. The sanitation target includes increasing the proportion of households in the municipality with access to safely managed sanitation from 25% in 2022 to 74% midterm and 100% by 2030. Eliminate open defecation by 2026 and the use of unimproved sanitation facilities by 2030.

The strategic directions to guide the ANANAD WASH master plan initiative is 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 ANANAD strategic framework is presented below.

The infrastructure and recurrent costs required to provide universal access to WASH services in the municipality is estimated at US\$ 34.8M, comprising US\$ 13.3M for universal sustainable water services and US\$ 21.5M for sanitation services. The estimated cost excludes 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 ANANAD 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 Nations<sup>1</sup>)*

Safe water, sanitation, and hygiene (WASH) are widely acknowledged as 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 North Municipal Assembly and its major development partners and stakeholders developed this 7-year (2023-2030) WASH master plan initiative termed Asunafo North Ahonidie, Nsupa, Asetenapa Dwumadie (ANANAD).

The ANANAD 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 North.

## 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 North, including the Municipal 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 offers an integrated framework for the Asunafo North Municipal Assembly's WASH service delivery. The master plan serves as a result-oriented tool for local government actors, beneficiary communities, development partners and other relevant stakeholders to harmonise, mobilise and contextualise their efforts towards achieving the relevant Sustainable Development Goals (SDGs), national and local WASH 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 ANANAD WASH initiative is to enhance the overall quality of life of the people. Through the ANANAD initiative, the Asunafo North Municipal Assembly and stakeholders envision that "By 2030, all residents, schools and health facilities in Asunafo North will have access to safe and sustainable managed water, sanitation and hygiene services".

The 7-year master plan serves as a blueprint to guide and improve planning, coordination, costing, resource mobilisation, and comprehensive tracking of WASH sector performance and results.

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

## **1.3 PROCESS OF DEVELOPING THE MASTER PLAN**

Developing the master plan took close to 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 municipality. 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 municipality. This data covered the status of the assets, functionality and water services, their management, and the performance of service providers. In addition, data was gathered on access to water and sanitation services from a representative sample of 300 households. Also, data was collected on WASH services provided in schools and health care facilities. An adapted version of the CWSA's data collection form was used by district-based staff to gather data. Mobile phone technology (mWater) was utilised to collect data.

### **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 Municipality 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 North, Asunafo South, 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 Municipality. 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.

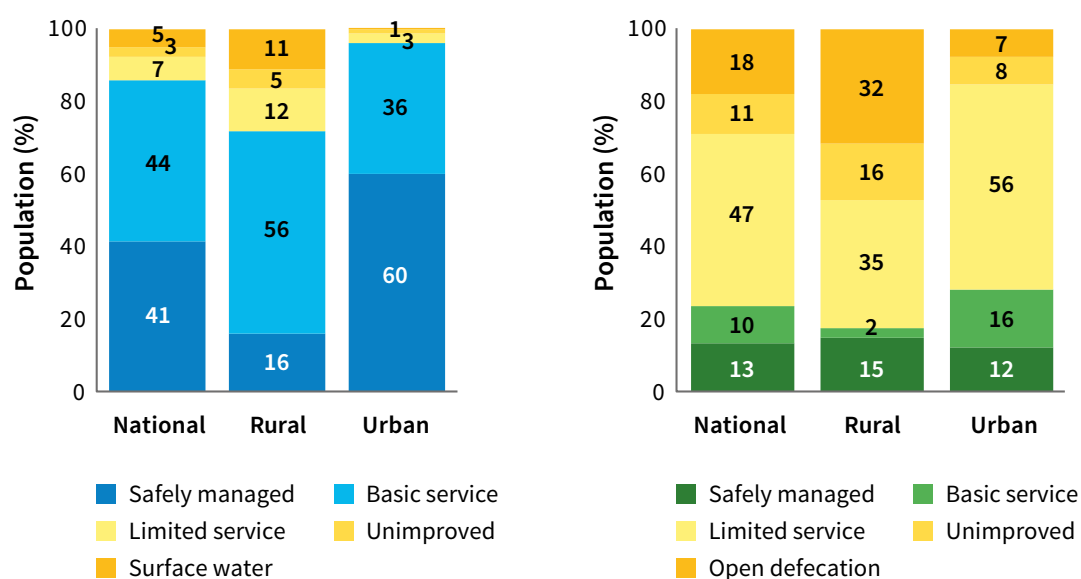
## 1.4 NATIONAL OVERVIEW OF WATER, SANITATION, AND HYGIENE

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 30minute 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 6 targets 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 the 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 ANANAD 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 ANANAD 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 ANANAD 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 MUNICIPALITY

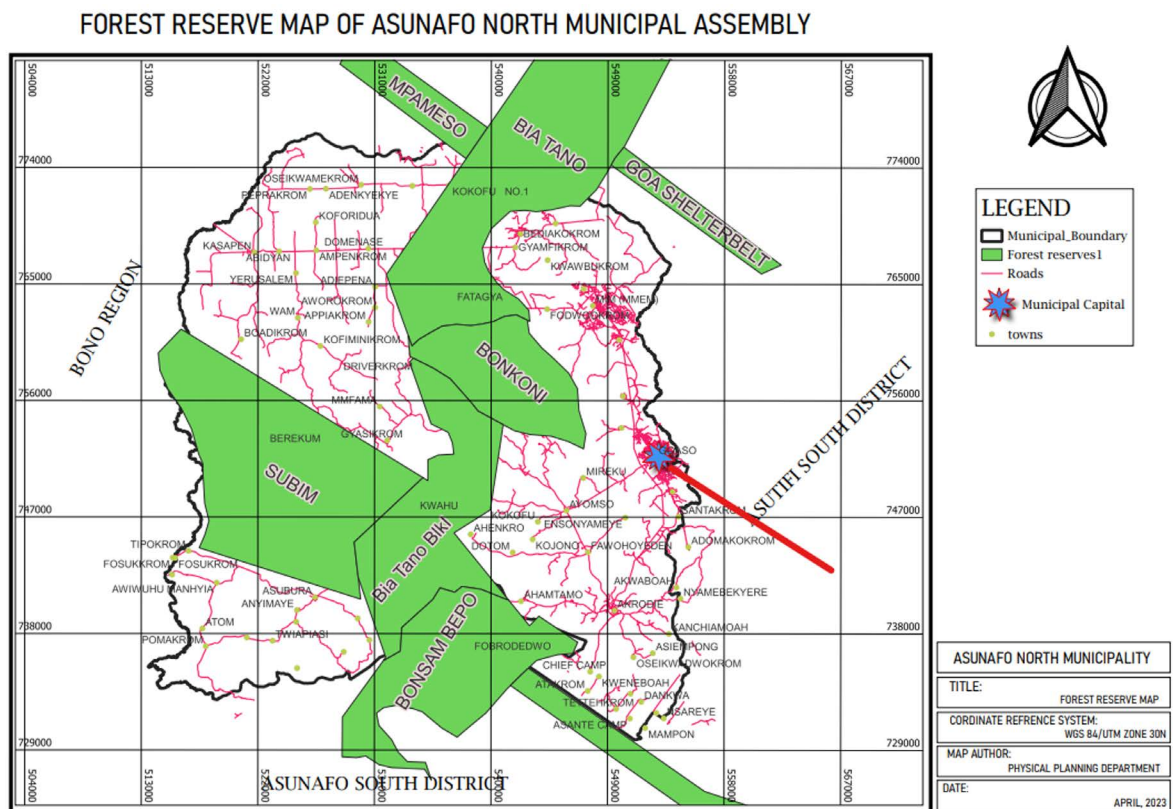
This section describes the physical characteristics, demographics, political administration, social-cultural context, and economic situation of the Asunafo North Municipality pertinent to WASH service delivery.

## 2.1 PHYSICAL FEATURES

The Asunafo North Municipality lies within Latitudes 6° 48' N and Longitudes 2° 31' W. It covers a total land area of about 1,412 km<sup>2</sup>, representing about 27% of the Ahafo Regional land size of 5,193 km<sup>2</sup>. The municipality shares boundaries with Asutifi North District to the North-East, Asutifi South District to the West, Dormaa Municipality to the North-West, Asunafo South District to the South-West, as well as Bia and Juabeso Districts to the West and South respectively (all in the Western North Region). Goaso, the municipal capital, is a major marketing centre located just at the edge of the Goa River, which serves as the political boundary between the municipality and the Asutifi South District. Goaso is about 80 km from Sunyani, the Brong Ahafo regional capital and 100 km from Kumasi, the Ashanti regional capital.

### 2.1.1 CLIMATE

The Asunafo North Municipality lies within the wet semi-deciduous vegetation zone, which experiences substantial precipitation. The municipality has a bio-modal rainfall pattern, with a major rainy season from April to July and a minor rainy season from September to October, with mean annual rainfall between 1250 mm and 1750 mm. The mean monthly temperature for the municipality is about 25.5 °C.



**Figure 3** Forest reserve map of Asunafo North Municipality

### **2.1.2 VEGETATION**

The vegetation of Asunafo North is characterised by tall trees with evergreen undergrowth and an abundance of economic trees. The municipality has five main forest reserves covering about 578 km<sup>2</sup> maintained as thick forest area. 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 municipality. The vegetation in the area is gradually changing into short tree forests and grassland. Most of the larger trees, including *Antiaris africana* (*kyenkyen*), *Chlorophora excelsa* (*Odum*), *Ceiba pentandra* (*Onyina*), *dahoma*, *kusia*, *wawa*, *sapele*, *aprokuma* and *emire* are now few, occurring as scattered emergent.

### **2.1.3 RELIEF AND DRAINAGE SYSTEMS**

Asunafo North lies within the central part of the forest dissected plateau of the physiographic region of Ghana, generally low-lying and rising gradually from 152 m to 305 m (500 ft – 1,000 ft) above sea level. The topography is more rugged towards the northeastern (Mim) area and southwestern (Abuom) area. The municipality is fairly drained by several streams and rivers, notably the Goa and the Ayum rivers. Most rivers and streams take their sources from the north-western portion of the municipality, flowing south and north-westwards. The rivers and streams present potential sources of surface water which can be treated and distributed for household consumption, agriculture and other uses.

### **2.1.4 GEOLOGY AND MINERAL DEPOSIT**

Asunafo North is underlain by the metamorphic rock, Precambrian, and Tarkwaian formations which consist of quartzite, shale, mudstones, sandstones and conglomerate or pebbly beds. Although there are areas of uniform lithology, the inter-bedding of the different geological units is a common feature of the basin. Underground water potential is limited due to the Voltaian formation. The shales and mudstones of the Obusum bed are essentially impermeable with very low groundwater potential. However, shallow aquifers can be developed in areas of good surface water hydrology. Even though the geology of the municipality presents low groundwater potential, some boreholes drilled in the Voltaian areas have yielded up to 600 litres per minute and above.

### **2.1.5 WATER RESOURCE MANAGEMENT**

Generally, the yield from groundwater in the municipality is very good. However, water stress tends to increase in the dry season. Forest depletion and poor farming practices along water bodies have led to erosion and exposure of riverbanks, causing evaporation of streams.

The municipality has several rivers and streams. The Ayum and Goa are sources of water for many communities. Key environmental challenges that affect water resources management in the municipality include:

- Land degradation and water quality deterioration from poor agricultural practices.
- Increasing urbanisation due to rapid population growth has further increased pressure on water and forest resources.
- Climate change also threatens water resources management in the municipality because of a lack of integrated flood management in development planning, inadequate coping mechanisms for climate change, and inadequate financing of water resources development and management.

### **2.1.6 NATURAL RESOURCE UTILISATION**

Asunafo North Municipality is endowed with several natural resources which offer good potential for socioeconomic development. These natural resources include vast fertile land, water bodies, forest products, and mineral deposits such as clay, gold and others. The large deposit of clay at Goaso and its surrounding communities can be developed into ceramic, brick, and tiles for the construction industry. There is vast land available for agricultural production and other investments such as estate development. The water bodies in the municipality, such as Goa, Ayum and Feter, offer the potential for irrigation farming and surface small town piped schemes for potable water. Another important resource available to the municipality and the nation is the large stock of timber gradually being depleted by uncontrolled and extensive forest exploitation.

## 2.2 DEMOGRAPHIC CHARACTERISTICS

The 2021 census found that the municipality has a total population of 150,198 people, with the urban population accounting for 53% of the total population, whilst the rural population constitutes 47% (Ghana Statistical Service, 2021).

However, census population data per community was not available at the time of the master plan development. The population of the municipality is projected to reach 161,010 by 2026 and 170,218 by 2030, with a population growth of 1.4% per year (see Table 1).

**Table 1** Population projections for Asunafo North from 2022 - 2030

Year	Based on census data*
2022	152,301
2023	154,433
2024	156,595
2025	158,787
2026	161,010
2027	163,265
2028	165,550
2029	167,868
2030	170,218

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

Mim is the most populated town in the municipality, with a population of some 35,808 people, while Goaso, with a population of some 21,555 people, is the district and regional capital. Furthermore, there are six towns with a population between 5,000 and 10,000 people (Kasapin, Akrodie, Ayomso, Bediako, Fawohoyeden and Pomaarom) and six towns with a population between 2,000 and 5,000 (Dominase, Dechem, Kwassidaekrom, Ayimaye, Asumura, Asudei).

The demand for facility provision and service levels is projected to rise with the anticipated growth in population, notably in Goaso, the regional capital.

## 2.3 POLITICAL ADMINISTRATION

The Asunafo North Municipality is one of the six administrative districts in the newly created Ahafo Region of Ghana, carved out of the then Brong Ahafo Region under the Constitutional Instrument (C.I.) 114, 2019. The Assembly gained municipal status in 2008 through Legislative Instrument (LI) 1873, with Goaso as the municipal capital.

The Municipal Assembly has five (5) Zonal Councils, one (1) Urban Council and twenty-nine (29) Electoral Areas which are key sub-structures for effective participation in the decentralisation processes. Table 2 shows the Zonal Councils within the municipality.

**Table 2** Zonal Councils within the municipality

S/N	Zonal Councils	Capital
1	Goaso Zonal Council	Goaso
2	Mim Urban Council	Mim
3	Akrodie Zonal Council	Akrodie
4	Ayomso Zonal Council	Ayomso
5	Dominase Zonal Council	Dominase
6	Asumura Zonal Council	Asumura

Source: Asunafo North Municipal Assembly, 2022

The Municipal Assembly's service delivery standards include participation, professionalism, client focus/service, transparency, efficient and effective use of resources and promotion of accountability. These standards resonate well with the objectives and partnership approach offered by the ANANAD WASH master plan, which seeks to strategically leverage opportunities and resources of various stakeholders to improve WASH services and reduce duplication (cost).

## 2.4 HEALTH CARE SERVICES

To facilitate health care delivery, the municipality is divided into six (6) sub-districts namely: Goaso, Mim, Akrodie, Asumura, Ayomso and Kasapin. The municipality has 25 health care facilities including three hospitals, seven health centres, 14 CHPS compounds and one maternity home. The municipality is further divided into thirty-one (31) CHPS zones.

The top ten causes of outpatient morbidity in Asunafo North Municipality are listed in Table 3 below.

**Table 3** Top ten OPD diagnosis in 2022

S/No.	Condition	Number
1	Malaria	74,183
2	Upper Resp. Tract Infections	16,268
3	Rheumatism & Other Joint Pains	7,448
4	Diarrhoeal Diseases	12,751
5	Skin Diseases	6,609
6	Intestinal Worms	10,434
7	Anaemia	11,925
8	Acute Urinary Tract Infection	5,784
9	Acute Eye Infection	3,303
10	Typhoid Fever	6,713

## 2.5 EDUCATION

The municipality has a total number of 213 schools, both publicly and privately owned. This comprises 50 KG & Primary Schools, 40 Primary Schools only, 32 Junior High Schools only, 83 Basic Schools, seven (7) Technical/Vocational Schools and one (1) Tertiary School. Table 4 provides details of the educational facilities in the municipality.

**Table 4** Educational facilities in the municipality

Type/Level	Public	Private	Sub-total
KG & Prim	20	30	50
Primary	40	0	40
JHS	32	0	32
Basic (KG-JHS)	48	35	83
SHS/TVET	2	5	7
Tertiary	1	0	1
<b>Grand Total</b>	<b>143</b>	<b>70</b>	<b>213</b>

Source: ASNMA Health Directorate, 2022

## 2.6 ECONOMIC CONTEXT

The main economic activities in the municipality include farming, mining, trading and banking. Farming accounts for about 60% of the working population, commerce for 12%, small-scale mining for 15%, and trading for 10%. The remaining working population is engaged in other varied economic activities. Crops such as cocoa, oil palms, pineapple, plantain, cassava, and corn are cultivated in the municipality, with cocoa as the major cash crop. The municipality is also endowed with valuable timber species such as mahogany and wawa.

### 2.6.1 REVENUE MOBILISATION AND EXPENDITURE MANAGEMENT

The Municipal Assembly's main revenue sources include Central Government transfers (GoG), District Assemblies' Common Fund (DACF), Internally Generated Funds (IGFs), Responsiveness Factor Grant (DACF-RFG), Urban Development Grant (UDG), Ghana Education Trust Fund (GETFUND), MSHAP, MAG and other donor funds such as UNICEF-ISS, IRC WASH 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 Municipal Assembly's revenue forecast for 2023-2030 is presented in Table 5.

**Table 5** Asunafo North revenue projections for 2023 – 2030<sup>2</sup>

REVENUE PROJECTIONS								
REVENUE ITEM	2023	2024	2025	2026	2027	2028	2029	2030
IGF	2,686,586.28	2,885,699.22	3,030,409.20	3,182,029.66	3,440,141.59	3,692,355.34	3,988,429.94	4,232,236.77
DACF	4,278,592.60	4,498,209.13	4,723,562.50	4,959,740.62	5,183,058.80	5,313,141.64	5,446,364.71	5,582,799.33
MP's CF	566,558.59	594,886.52	624,630.85	655,862.39	708,331.38	743,747.95	780,935.35	859,028.88
PWDs CF	262,844.63	270,729.97	284,266.47	298,479.79	313,403.78	329,073.97	345,527.67	373,169.88
MSHAP	21,500.47	22,145.48	22,809.85	23,950.34	24,668.85	25,408.92	26,171.18	26,956.32
GOG	4,915,400.41	5,363,880.93	5,894,238.47	6,188,950.40	6,801,163.69	7,468,855.21	8,206,480.95	9,019,077.61
DACF-RFG	1,299,059.32	1,919,681.29	1,958,074.92	1,997,236.42	2,057,153.51	2,118,868.12	2,182,434.16	2,247,907.19
UDG	7,044,132.00	8,097,066.00	8,501,919.30	8,927,015.27	9,373,366.03	9,842,034.33	10,334,136.05	10,850,842.85
OTHERS-MAG	32,294.33	33,909.10	35,604.55	37,384.78	39,254.02	41,216.72	43,277.56	43,710.33
UNICEF-ISS	30,000.00	31,500.00	33,075.00	34,728.75	36,465.19	38,288.45	40,202.87	42,213.01
IRC-WASH PROG	200,000.00	210,000.00	220,500.00	231,525.00	243,101.25	255,256.31	268,019.13	281,420.08
<b>TOTAL</b>	<b>21,336,968.63</b>	<b>23,927,707.64</b>	<b>25,329,091.11</b>	<b>26,536,903.42</b>	<b>28,222,135.09</b>	<b>29,868,246.96</b>	<b>31,661,979.57</b>	<b>33,559,362.25</b>

Source: Asunafo North Municipal Assembly, 2022. Projections by MPCU

The Asunafo North Municipal Assembly's overall revenue is projected to increase annually by about 6% on average, from GHC 21.3M (in 2023) to GHC 33.56M (in 2030). However, the highest annual increase in overall revenue (12%) is expected between 2023 and 2024. Revenues from the Responsiveness Factor Grant (DACF-RFG) and the Urban Development Grant (UDG) are anticipated to increase by 48% and 15%, respectively from 2023 to 2024.

The anticipated revenue projections appear encouraging as the lowest estimated annual revenue (GHC 21.3M in 2023) exceeds the estimated average yearly cost (GHC 19.97M) required to implement the MTDP (2022-2025), as shown in Table 6.

<sup>2</sup> 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 6** Estimated cost of MTDP (2022-2025)

Programme	Programme Cost 2022-2025	Estimated Average Yearly Cost
<b>1. Economic Development</b>	5,026,458.56	1,256,614.64
<b>2. Social Development</b>	67,687,191.49	16,921,797.87
<b>3. Environment, Infrastructure and Human Settlements</b>	1,231,274.43	307,818.6075
<b>4. Governance, Corruption and Public Accountability</b>	4,717,705.11	1,179,426.278
<b>5. Emergency Planning and Response</b>	627,000.00	156,750
<b>6. Implementation, Coordination, Monitoring and Evaluation</b>	609,000.00	152,250
<b>Total</b>	<b>79,898,629.59</b>	<b>79,898,629.59</b>

Source: Asunafo North Municipal Assembly 2022, MTDP (2022-2025)

Revenue mobilisation, however, remains a challenge. The MTDP (2022-2025) identified revenue underperformance due to leakages, taxpayer apathy, weak capacity, delays in central government transfers etc., as major concerns. The Municipal Assembly anticipated a 41% revenue shortfall in its MTDP (2022-2025). Given existing revenue mobilisation constraints, less than 60% of the projected revenues are estimated to be realised. By implication, the Assembly's annual revenues expected to be generated may be barely adequate to 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 ANANAD WASH master plan initiative. The capacity of the ANANAD partners 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 North Medium-Term Development Plan (MTDP 2022-2025) were taken into consideration while preparing the ANANAD WASH master plan. Table 7 lists the top WASH-related development concerns that the MTDP has prioritised.

**Table 7** Key development priorities for the Asunafo North Municipality

Sector	Key Development Issues/Priorities
<b>Social Services</b>	
<b>Water</b>	<ol style="list-style-type: none"> <li>1. High rate of rural-urban migration with its effects on water provision</li> <li>2. Poor and inadequate rural water infrastructure and services</li> <li>3. Riverbank encroachment</li> <li>4. Inadequate capacities for maintenance of water facilities</li> <li>5. Low connections in urban households</li> <li>6. High (41%) use of surface water sources in rural areas</li> <li>7. Poor management of handpumps (48% of handpumps have WSMTs)</li> <li>8. Poor WSMT performance (18% of functional handpumps have WSMTs that meet handpumps service provider benchmarks)</li> </ol>
<b>Sanitation</b>	<ol style="list-style-type: none"> <li>1. Improper disposal of solid and liquid waste</li> <li>2. Inadequate engineered landfill sites and wastewater treatment plants</li> <li>3. Improper management of E-waste</li> <li>4. Increasing demand for household water supply</li> <li>5. Poor sanitation and waste management</li> <li>6. Unsustainability of sanitation and health services</li> <li>7. Very low access to basic sanitation services (with offsite treatment)</li> <li>8. High rate of open defecation in communities</li> </ol>
<b>Hygiene</b>	<ol style="list-style-type: none"> <li>1. Poor hygiene practices</li> <li>2. Poor quality of hygiene services for children and families</li> <li>3. Poor drainage system</li> <li>4. Silting and choking of drains</li> <li>5. Uncovered drains</li> </ol>
<b>Institution</b>	<ol style="list-style-type: none"> <li>1. Weak implementation of administrative decentralisation</li> <li>2. Ineffective sub-district structures</li> <li>3. Weak ownership and accountability of leadership at the local level</li> <li>4. Poor service delivery at the local level</li> <li>5. Inadequate capacity of local governance practitioners</li> <li>6. Limited capacity and opportunities for revenue mobilisation</li> <li>7. Weak coordination of administrative functions</li> </ol>
<b>Education (WASH in Schools)</b>	<ol style="list-style-type: none"> <li>1. Low access to basic water services in schools</li> <li>2. Low access to basic sanitation services in schools</li> </ol>
<b>Environment</b>	<ol style="list-style-type: none"> <li>1. Inadequate staff leading to weak enforcement of regulations</li> <li>2. Inappropriate farming practices</li> <li>3. Low institutional capacity to adapt to climate change and undertake mitigation actions</li> <li>4. Vulnerability and variability to climate change</li> <li>5. Loss of trees and vegetative cover</li> <li>6. Degraded landscapes</li> </ol>

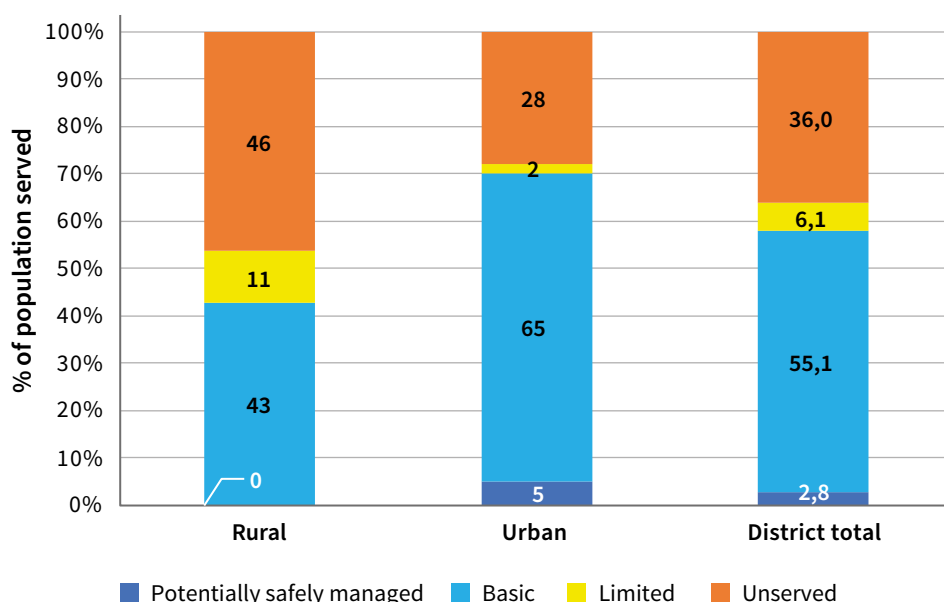
Source: Asunafo North Municipal Assembly 2022, MTDP (2022 – 2025)

# 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 municipality’s WASH challenges, gaps and opportunities are also presented.

## 3.1 WATER SERVICES LEVEL (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 North Municipal 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 (6.1%). The household survey found that the majority of people with access to improved water services had so within a 30 min round trip (84% 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 half of the rural population and more than a quarter of the urban population not having improved water services.

A total of 40 rural communities were found not to have any water supply assets at all. In addition, 11 communities were found to be unserved because of broken-down handpumps.

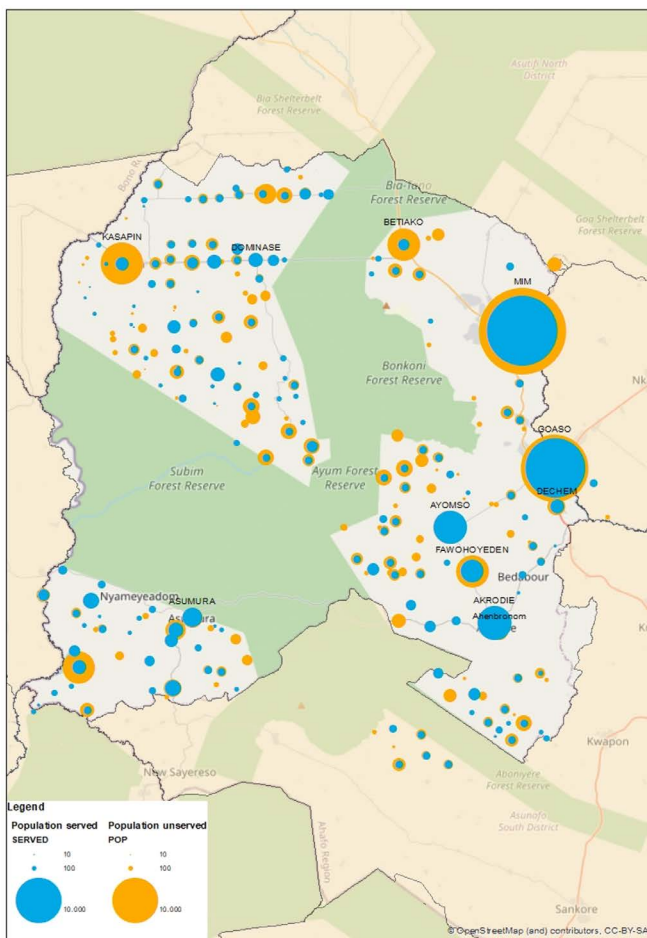
Of the seven (7) urban communities, only four (4) were fully served, while a considerable proportion of the population was unserved, especially in Kasapin, and Bediako. (See Table 8)



**Table 8** Urban population served and unserved

Community	% people served with potentially safely managed	% people served	Pop unserved
MIM	0%	83%	5978
GOASO	23%	100%	0
KASAPIN	2%	10%	7600
AKRODIE	0%	100%	0
AYOMSO	0%	100%	0
BEDIAKO	0%	24%	3900
FAWOHOYEDEN	0%	54%	2330
POMAAROM	0%	18%	4100
DOMINASE	0%	70%	907
DECHEM	0%	43%	1192
KWASIDDAEKROM	0%	0%	2000
ANYIMAYE	0%	68%	650
ASUMURA	0%	100%	0
ASUADEI	0%	75%	500

Source: Asunafo North Municipal Assembly, 2022



**Figure 5** Served and unserved communities

Source: Asunafo North Municipal Assembly, 2022

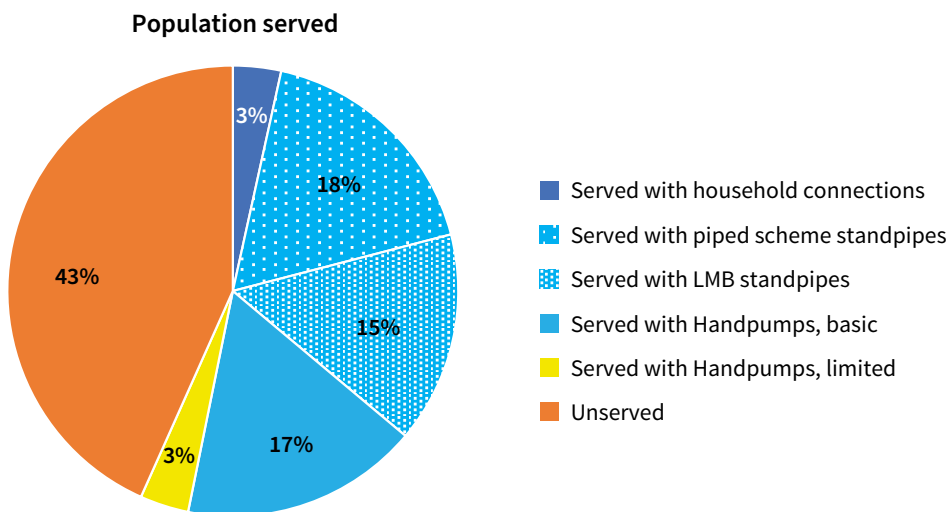
### 3.1.1 WATER SERVICE DELIVERY MODELS: INFRASTRUCTURE AND MANAGEMENT MODELS

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

- CWSA-managed small town piped schemes, with a mix of household connections and public standpipes: in Ayomso, Goaso and Mim.
- WSMT-managed small town piped scheme, with a mix of household connections and public standpipes: in Akrodie.
- Limited mechanised boreholes (51).
- Boreholes or hand-dug wells with handpumps (236).

As shown in Figure 6, the proportion of the population served under both the piped scheme SDM (four piped schemes) and the handpump SDM amounts to about 20%. A further 15% of the population is served by limited mechanised boreholes.

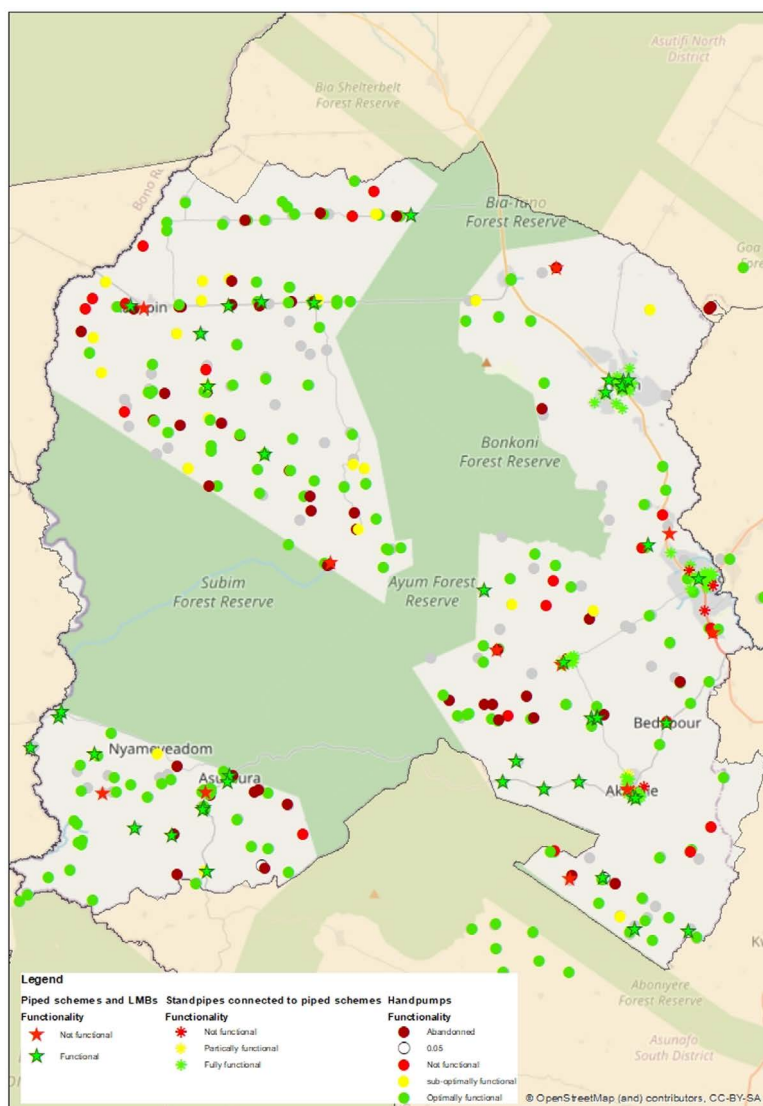
In addition to these service delivery models, people use hand-dug wells without handpumps and surface water (indicated as “unserved” in Figure 6).



**Figure 6** Distribution of water service delivery models

Source: Asunafo North Municipal Assembly, 2022

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 North Municipal Assembly, 2022

### Piped schemes

Table 9 presents the main infrastructural characteristics of the four piped schemes in the district. It shows that the scheme in Mim is the largest in terms of service area population and number of water sources, and the Goaso scheme is the largest in terms of number of household connections. The four piped schemes are all more than 15 years old. The Akrodie and Goaso schemes were rehabilitated in 2019.

**Table 9** Piped scheme characteristics

Indicators	Akrodie Water Board	CWSA-Ayomso	CWSA-Mim	CWSA – Goaso water system
<b>Number of sources</b>	3	3	7	3
<b>Number of functional sources</b>	2	1	7	3
<b>Number of household connections</b>	97	98	34	996
<b>Number of standpipes</b>	17	15	30	25
<b>Number of standpipes assessed</b>	16	15	20	21
<b>% of assessed standpipes functioning at time of visit</b>	81%	100%	100%	81%
<b>Number of standpipe spouts</b>	34	30	60	50
<b>Service area population</b>	6,000	5,911	26,629	21,508

Source: Asunafo North MPCU, 2022

As shown in Table 10, data on key performance indicators for several schemes is still incomplete, including non-revenue water, operating cost recovery and staffing. For the two schemes for which data on the amount of water produced and sold is available, the water consumption 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 Goaso, 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 only available in Mim. Operating cost recovery data was only available for Akrodie, with a ratio slightly above 1, and Goaso, with a ratio sufficiently above 1, at 1.69. The indicator on number of staff per 1000 connections seemed rather high for the two schemes, which indicates potential challenges with staffing efficiency. The proportion of female staff in management positions is very low.

**Table 10** Piped scheme key performance indicators

Indicators	Akrodie Water Board	CWSA-Ayomso	CWSA-Mim	CWSA -Goaso
<b>Total amount produced in m<sup>3</sup>/year (and lpcd)</b>	No data	30,206 (14 lpcd)	No data	131,619 (17 lpcd)
<b>Total amount sold in m<sup>3</sup>/year (and lpcd)</b>	No data	22,694 (11 lpcd)	No data	97,781 (12 lpcd)
<b>Non-Revenue Water (NRW)</b>	No data	25%	No data	26%
<b>Continuity (average hours per day with supply)</b>	24	24	24	8
<b>Water quality compliance</b>	0	0	100	0
<b>Bill-Revenue collection efficiency (%)</b>	21%	No data	No data	80%
<b>Operating Cost Coverage (OCC)</b>	1.06	No data	No data	1.69
<b>Tariff for household connections (GHC/m<sup>3</sup>)</b>	4	9	5.5	5
<b>Number of staff members per 1000 connections</b>	No data	50	No data	17
<b>Share of women from total staff</b>	0%	50%	No data	14%
<b>Share of women in management position</b>	0%	1%	No data	0%

Source: Asunafo North Municipal Assembly, 2022

### Limited mechanised boreholes

There are some 51 limited mechanised boreholes in the district. The majority of these have been constructed relatively recently, almost half (24 of 51 LMBs) since 2020. Most limited mechanised boreholes have a single standpipe. They are commonly connected to the electricity grid (with the exception of three LMBs which have solar panels). Of the 51 LMBs, 42 (82%) were found to be functional at the time of the assessment.

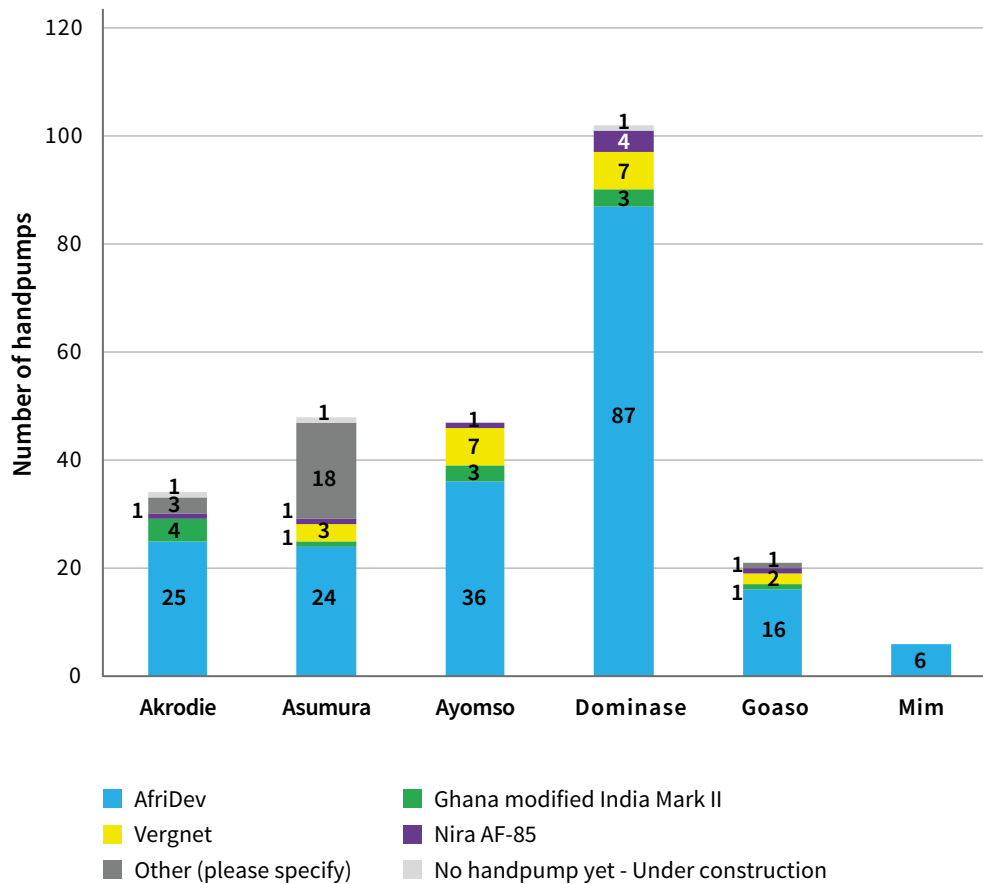
A total of 19 LMBs were reported to be managed by LMB WSMTs, while 12 were reported not to have a management structure in place. Seven were reported to be managed by private persons and three (3) by elders. The remaining LMBs were managed by institutions (two by schools, three by HCFs and four by religious bodies). For one LMB, the management structure was unknown.

Users contribute to the operational costs for 33 (65%) out of the 51 LMBs. Amounts paid range from 0.10 to 0.20 GHC per bucket (amounting from 5.56 GHC to 11.11 GHC per m<sup>3</sup>, which is more or less in line with household connection tariffs for piped schemes).

### Handpumps

There are some 345 handpumps in the district. The majority of handpumps in the district are of the Afridev type as shown in Figure 8. Only about 10% of handpumps have been constructed relatively recently, since 2020. The majority of handpumps were reported to have been constructed with financial support from local (130) or national (45) 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 Ltd have constructed handpumps as well over the years (some 11 handpumps over the past 15 years). Some eight (8) handpumps were constructed with support from ChinaAid in 2017.

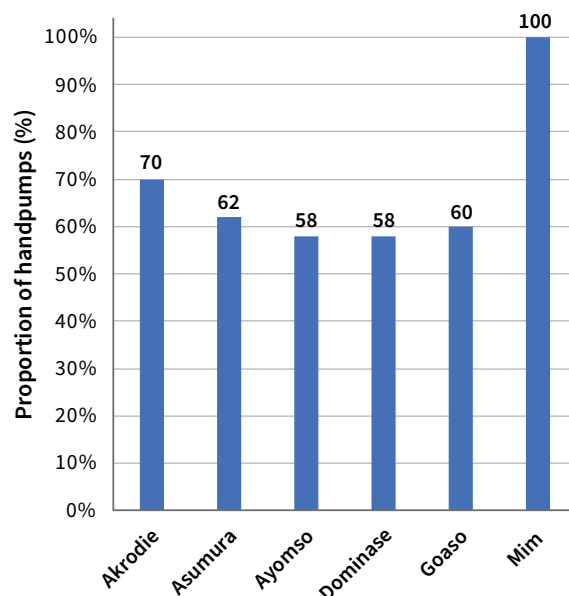
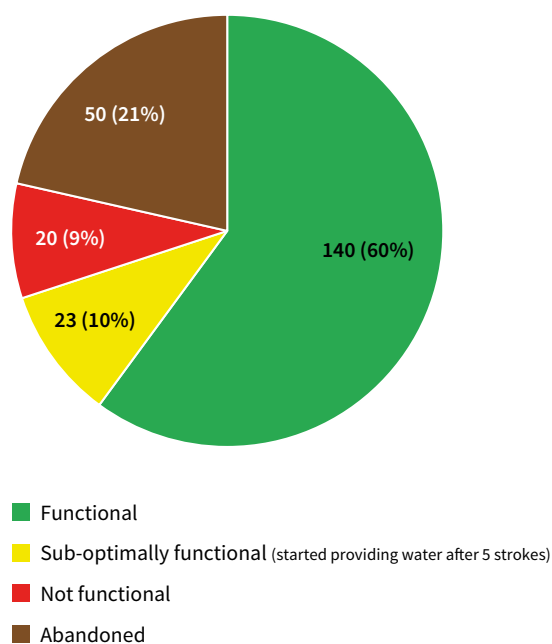


**Figure 8** Handpump types

Source: Asunafo North Municipal Assembly, 2022

About 60% 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 9% of handpumps were not functioning at the time of the visit. About 22% had not been functioning for over one (1) year (and therefore considered as “abandoned”).

Of the non-abandoned handpumps, about 61% were functioning for at least 95% of the year (with breakdowns of less than 18 days over the last year).



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

Source: Asunafo North Municipal Assembly, 2022

Slightly more than half of non-abandoned handpumps have management structures (mainly WSMTs) in place. Especially in Ayomso area council, it was reported that there were no WSMTs (see Table 11).

**Table 11** Handpump management

Indicators	Akrodie	Asumura	Ayomso	Dominase	Goaso	Mim	Total
<b>Small community WSMT (WATSAN)</b>	16	5	0	51	15	0	<b>87</b>
<b>Other</b>	2	2	0	1	1	3	<b>9</b>
<b>No management structure</b>	9	14	31	29	4	0	<b>87</b>
<b>Total</b>	<b>27</b>	<b>21</b>	<b>31</b>	<b>81</b>	<b>20</b>	<b>3</b>	<b>183</b>

Source: Asunafo North Municipal Assembly, 2022

Only 19 handpumps had tariffs in place (12% of optimally and sub-optimally functioning handpumps). In line with the LMB tariff, tariffs ranged from 0.10 to 0.20 GHC per bucket (amounting from 5.56 GHC to 11.11 GHC per m<sup>3</sup>, more or less in line with household connection tariffs for piped schemes).

Only a few of the 32 WSMTs in place and assessed met the benchmarks of the handpump service provider indicators, as shown in Table 12. 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 12** Handpump service provider performance

<b>Number of WSMTs</b>	<b>32</b>
<b>Average number of handpumps managed per WSMT</b>	2.09
<b>G1: Composition of WSMT (BM: WSMT, composed in line with the CWSA guidelines, and has received initial training)</b>	3%
<b>G2: Record Keeping and Accountability (BM: All records are kept and up to date)</b>	34%
<b>G3: Freedom from Political Interference (BM: Any change that had occurred in the WSMT was not due to political or chieftaincy interference)</b>	94%
<b>O1a: Spare Parts Supply (BM: supply within 3 days)</b>	34%
<b>O1b: Area Mechanic Services (BM: Available within 3 days)</b>	53%
<b>O2a: Breakdown repair (BM: Generally done within 3 days)</b>	33%
<b>O2b: Routine Maintenance (BM: Carried out)</b>	50%
<b>O3: Water Quality Testing (BM: Carried out, by certified institution)</b>	9%
<b>FM1: Revenue and Expenditure Balance (BM: R/E ratio &gt;1)</b>	9%
<b>FM2: There is sound financial management (BM: Bank account and up-to-date account records in place)</b>	22%
<b>FM 3: Tariff setting (BM: Tariff in place)</b>	19%
<b>FM4: Facility Management Plans (BM: Facility management plan that spells out the rules for the WSMT in place)</b>	44%

Source: Asunafo North Municipal Assembly, 2022

### 3.1.2 OVERVIEW OF MAIN WATER SERVICE CHALLENGES

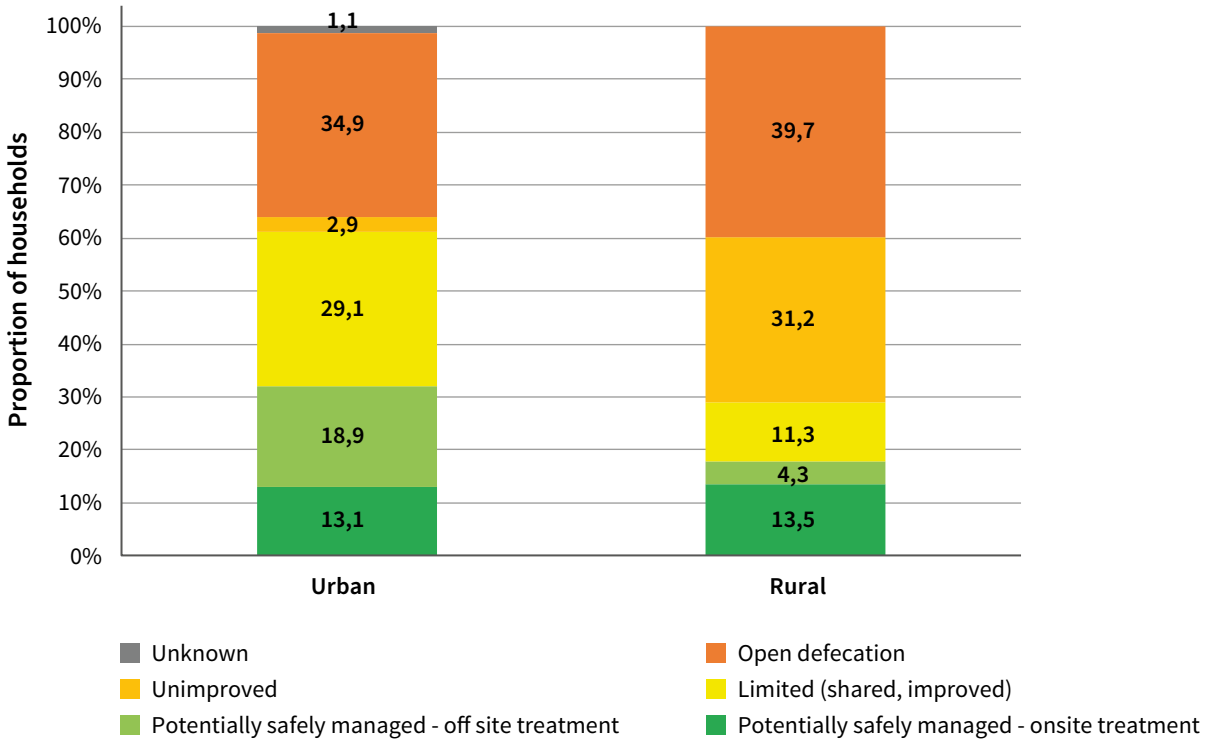
Main water challenges identified include:

- Low coverage of at least basic services, with a considerable proportion of the population depending on surface water and unimproved water sources.
- Low coverage of safely managed services, with only a total of 1,225 household connections in the district. This is a limiting factor for households accessing safely managed water supply.
- Challenges with water availability (reliability) in the Goaso water supply scheme and water quality compliance in all piped schemes except Mim. These could prevent households from accessing safely managed water supply.
- Lack of data required for performance monitoring of piped schemes.
- Lack of clear management and financial arrangements needed for ensuring sustainable water service provision by LMBs.
- Functionality challenges, especially for community-managed handpumps.
- Sustainability challenges related to handpump water service provision, with only a few handpumps having management and financial structures in place for ensuring sustainable water service provision.
- Low capacity and performance of handpump WSMTs.

## 3.2 SANITATION AND HYGIENE

### 3.2.1 SANITATION SERVICE LEVELS

As shown in Figure 10, open defecation is still practised by a considerable part of the urban (34%) and rural (40%) 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.

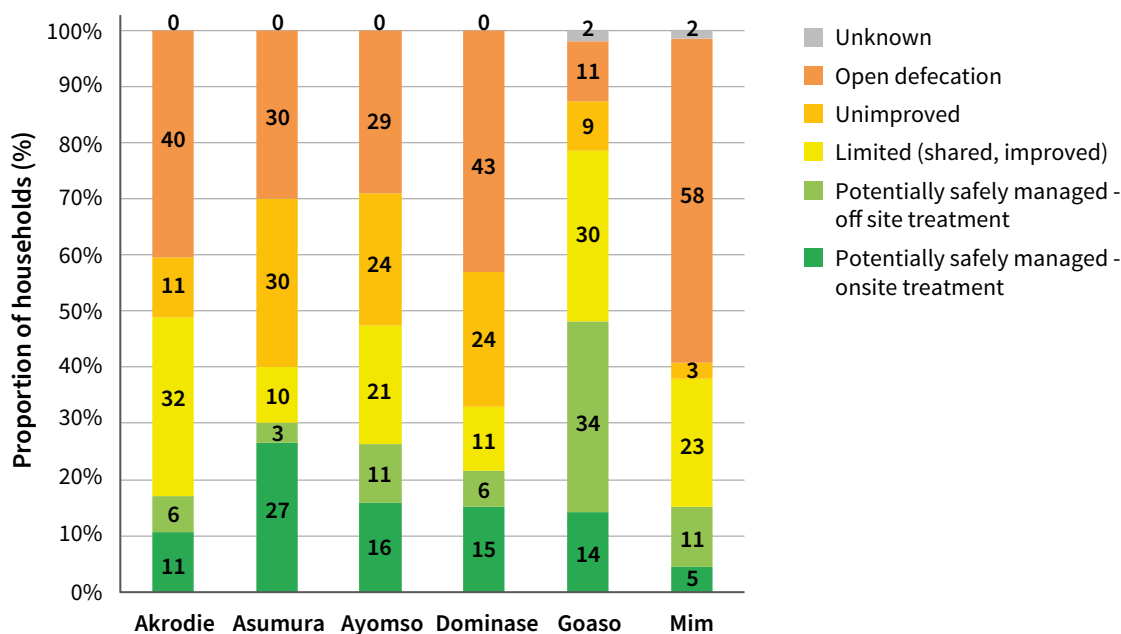


**Figure 10** Urban and rural sanitation coverage

Source: Asunafo North Municipal Assembly, 2022



Basic sanitation coverage is lowest in Akrodie and Mim area councils and highest in Goaso area council. (See Figure 11).



**Figure 11** Sanitation coverage per area council  
 Source: Asunafo North Municipal Assembly, 2022

The main sanitation service delivery models in the municipality 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 19% of the urban population uses private latrines with offsite treatment. In addition, about 5% use shared or public 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 population (some 27%) uses unimproved public sanitation facilities. (See Table 13)

**Table 13** Proportion of households with access to sanitation facilities

	Total district				Urban				Rural			
	Private	Shared	Public	OD	Private	Shared	Public	OD	Private	Shared	Public	OD
Improved, onsite treatment	13%	6%	9%		13%	8%	12%		13%	3%	5%	
Improved, offsite treatment	12%	2%	0%		19%	4%	1%		4%	0%	0%	
Unimproved	1%	2%	13%		1%	1%	2%		1%	3%	27%	
Unknown	1%	0%	4%		1%	0%	5%		0%	0%	4%	
OD				37%				35%				40%

Source: Asunafo North Municipal Assembly, 2022

### 3.2.2 SANITATION INFRASTRUCTURE ALONG THE SANITATION CHAIN

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

Capture and containment of faecal sludge takes place at latrines and 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.

Based on the 2022 household survey, the total population without access to a toilet facility stands at 93,480. Out of which, about 39,644 require (public and shared) toilet facilities while a total of 53,836 need (private and shared) toilet facilities. According to the MTDP, there were 4,751 private toilets in the municipality serving a total population of 47,510.

In addition, the household survey found a considerable number of households using public facilities. According to the MTDP, 35 public latrines were serving a total of 35,000 people in the municipality.

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

The 2022 household survey found that only six of 49 (12%) urban households with private latrine facilities reported having their pits or septic tanks emptied by cesspool emptiers.

### 3.2.3 SOLID WASTE MANAGEMENT

On average, the municipality generates 10,368 volumes of waste annually from the 24 communal refuse containers in Goaso and Mim. The majority of the solid waste generated in the municipality is organic, with a compostable portion estimated to be above 80% by weight which offers opportunities for investment in biological conversion (composting) or digestion technology. Solid waste is generally managed in the municipality through public dumping in open spaces and container dump sites. A third of the residents in both rural and urban areas resort to indiscriminate/crude dumping of refuse. The existing waste infrastructure is not sufficient for the safe disposal and management of solid waste. The municipality has only one refuse truck and many of the refuse containers are in poor condition which poses a threat to proper waste management. The completed modern integrated waste processing and recycling plant in the district, with a capacity to process 400 tonnes of solid waste daily, will to a greater extent ensure the proper management of waste in the municipality.

### 3.2.4 OVERVIEW OF MAIN SANITATION CHALLENGES

The main sanitation challenges include:

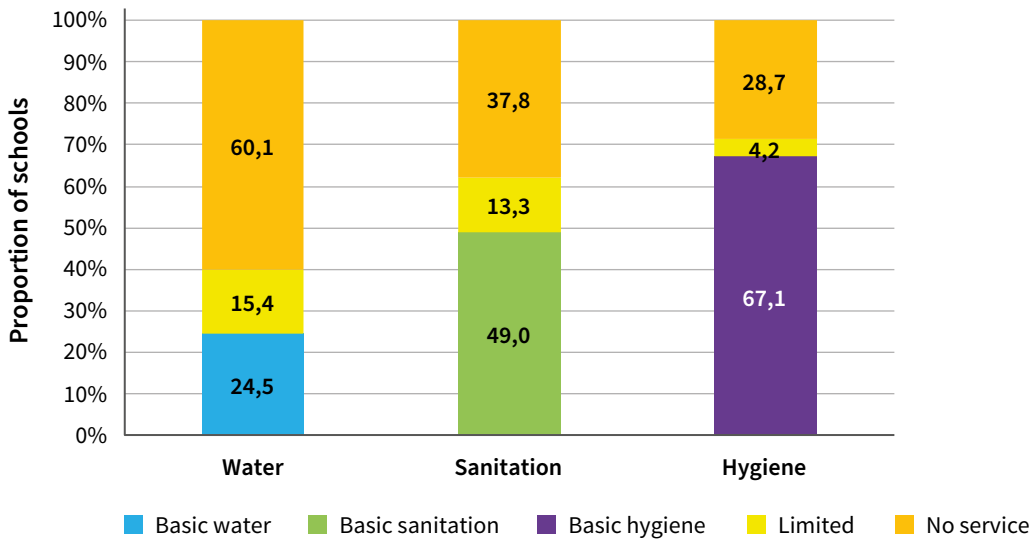
- Prevailing high levels of open defecation in both rural (40%) and urban (34%) areas of the district.
- High proportion of rural households (29%) using unimproved, mostly shared, sanitation facilities.
- High proportion of urban households (30%) using improved shared facilities
- Lack of collection, treatment and safe disposal of human waste from sanitation facilities which are supposed to have offsite treatment.
- Improper disposal and treatment of solid waste.

### 3.3 WASH IN INSTITUTIONS

#### 3.3.1 WASH IN SCHOOLS

A total of 143 **schools** have been assessed, including 47 primary schools, 33 JHSs, 58 combined primary and JHS schools and five (5) SHS/vocational schools.

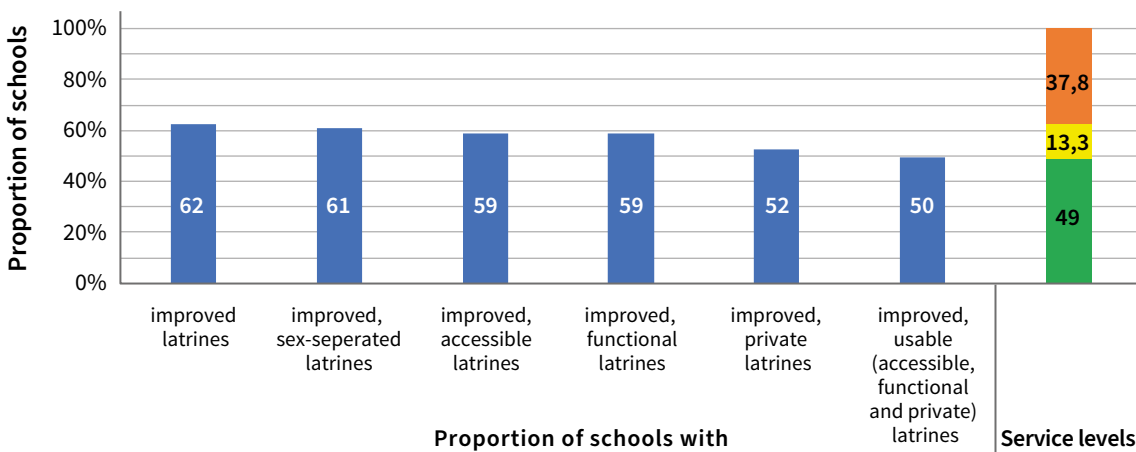
To have basic water services, drinking water has to be available from an improved source at the school. As shown in Figure 12, 24.5% of schools have basic water and 60% of schools are without water services. The remaining 15% of schools had an improved water source, but water was not available at the time of data collection.



**Figure 12** WASH in schools

Source: Asunafo North Municipal 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, 49% of schools have basic sanitation services. Some 37.8% of schools were without improved sanitation facilities (24.5% without any facility and 13.3% with unimproved facilities). Of the remaining 13.3% 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). (See Figure 13).



**Figure 13** School sanitation services

To have basic hygiene services, schools should have handwashing facilities with water and soap. This was the case for 67% of the assessed schools. Some 29% had no handwashing facilities with water in place at all. The remaining schools had handwashing facilities with water, but no soap.

### 3.3.2 HEALTH CARE FACILITY WASH

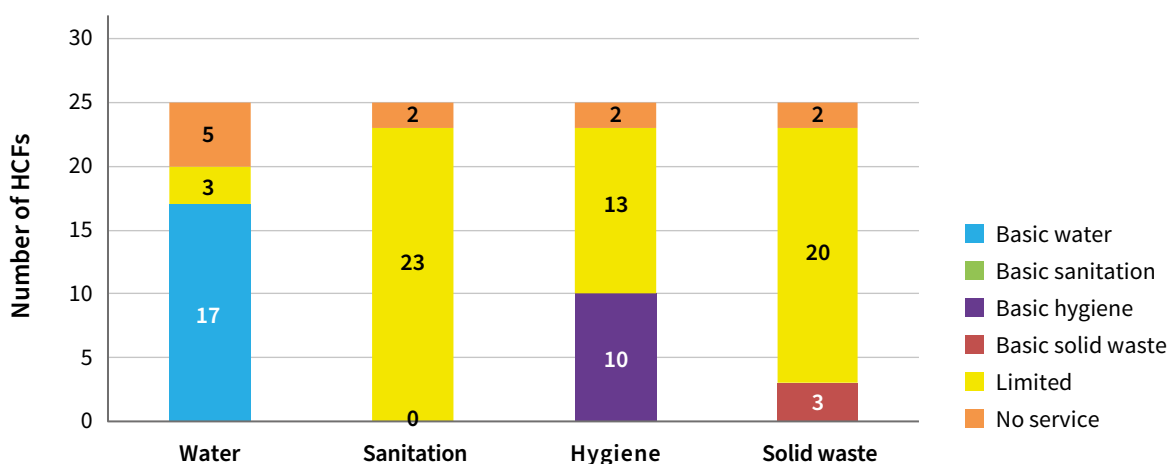
All 25 **health care facilities** have been assessed. Figure 14 shows the number of HCFs with different levels of water, sanitation, hygiene and solid waste management services.

To have basic water services, the HCF should have water available from an improved source on the premises. This was the case for 17 of the 25 HCFs. Three HCFs were reported to have limited water services, without an improved source on its premises (but within 500 m), and five HCFs were reported to not have water from an improved water source within 500 m. None of the eight HCFs without an improved water source on premises is within the service area of a small community or town water supply piped scheme.

In order 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 25 HCFs had improved sanitation facilities in place, none met all criteria for basic sanitation. The Asuade and Dechem CHPS compounds were reported to have unimproved sanitation facilities in place. There are 19 HCFs with usable (functional, private and accessible) improved sanitation facilities, 14 with improved facilities for staff, nine (9) with latrines which are sex separated, but only one with sanitation facilities accessible to people with limited mobility and none with menstrual hygiene facilities.

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 points of care, but only 10 had handwashing facilities with soap and water near the toilets.

In order 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 three (3) HCFs that had 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, without satisfying all requirements for basic service, and two (2) HCFs without separate bins.



**Figure 14** WASH in health care facilities (HCFs)  
 Source: Asunafo North Municipal Assembly, 2022

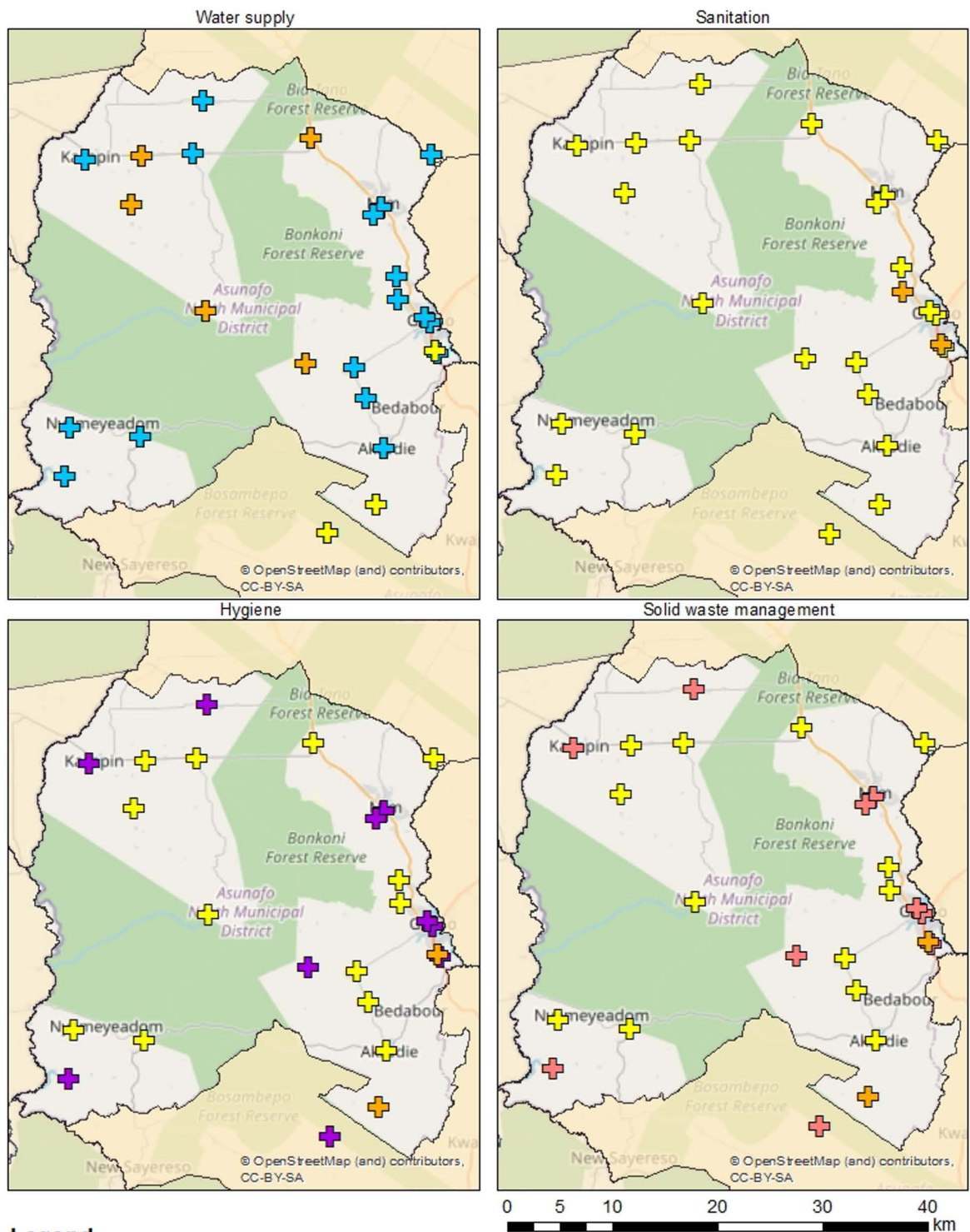


Figure 15 HCF WASH

Source: Asunafo North Municipal Assembly, 2022

### 3.3.3 OVERVIEW OF MAIN INSTITUTIONAL WASH CHALLENGES

#### **School WASH:**

School WASH facilities service levels are generally low:

- More than three-quarters of schools do not have improved water services that were functional at the time of the assessment.
- Almost two-thirds of schools did not have improved, usable, sex-separated latrines.
- One-third of schools did not have handwashing facilities.

#### **Health care facility WASH:**

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

- There are eight (8) HCFs without water supply from an improved source on premises, two (2) without improved sanitation facilities, two (2) without handwashing facilities at point of care, and two (2) without solid waste management facilities.
- None of the HCFs have menstrual hygiene facilities, and only one (1) has sanitation facilities accessible to people with a disability.

## 3.4 KEY INTRACTABLE CHALLENGES IN THE MUNICIPALITY

The Asunafo North Municipal Assembly Medium-Term Development Plan (2022-2025) identified key threats to the delivery of reliable and sustainable WASH services which need to be addressed. These include:

1. Limited funding of WASH services
2. High rate of rural-urban migration with effects on water provision
3. Poor and inadequate rural water infrastructure and services
4. Riverbank encroachment
5. Inadequate capacities for maintenance of water facilities
6. Low number of connections in urban households (15%)
7. Poor management of handpumps (48% of handpumps have WSMTs)
8. Poor WSMT performance (18% of functional handpumps have WSMTs that meet handpumps service provider benchmarks)
9. Uncompleted engineered landfill site and wastewater treatment plants
10. Improper disposal of solid and liquid waste
11. Inadequate engineered landfill sites and wastewater treatment plants
12. Improper management of E-waste
13. Poor sanitation, waste management and hygiene services for children and families
14. Unsustainability of sanitation and health services
15. Very low access (12.5%) to basic sanitation services (with offsite treatment)
16. High open defecation rate in communities (36.7%) and
17. Low access to basic water services in schools (24%)

## 3.5 KEY OPPORTUNITIES IN THE DISTRICT

Key opportunities in the Asunafo North Municipality's WASH sector include the following:

1. Availability of water resources (surface and groundwater) in the municipality
2. High political commitment towards WASH
3. High urban population with demand for higher water services

# 4 MASTER PLAN VISION, TARGETS AND IMPLICATIONS

This section presents the vision of the ANANAD 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 ANANAD WASH master plan vision is presented along with the medium- (2026) and long-term (2030) targets.

## 4.1 VISION

The ANANAD WASH Master Plan initiative envisions that “All citizens, schools and health facilities in Asunafo North have access to safe and sustainable managed 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 ANANAD initiative will work to improve access to safe and reliable water supply services for all. Table 14 presents the targets for water within the medium to long term.

**Table 14** 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
<b>Safely managed</b>	0%	5%	<b>3%</b>	0%	35%	<b>20%</b>	0%	62%	<b>35%</b>
<b>Basic</b>	43%	65%	<b>55%</b>	88%	60%	<b>72%</b>	100%	38%	<b>65%</b>
<b>Limited</b>	11%	2%	<b>6%</b>	11%	2%	<b>6%</b>	0%	0%	<b>0%</b>
<b>Unservd</b>	46%	28%	<b>36%</b>	1%	3%	<b>2%</b>	0%	0%	<b>0%</b>

Source: Asunafo North Municipal Assembly, 2022

The water service target is to increase the proportion of the population with access to safely managed water sources from 3% in 2022 to 35% by 2030. In addition, increase access to at least basic water services from 55% to 65% by the end of 2030.

#### 4.2.2 SANITATION AND HYGIENE TARGETS

The ANANAD initiative will work to improve sanitation as an essential social service and major determinant for improving health and quality of life in the municipality. Table 15 provides an overview of the coverage and projections by 2030.

**Table 15** 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
<b>Safely managed</b>	18%	32%	<b>25%</b>	72%	76%	<b>74%</b>	100%	100%	<b>100%</b>
<b>Limited</b>	8%	25%	<b>17%</b>	8%	24%	<b>16%</b>	0%	0%	<b>0%</b>
<b>Unimproved</b>	33%	9%	<b>20%</b>	20%	0%	<b>9%</b>	0%	0%	<b>0%</b>
<b>Open defecation</b>	41%	35%	<b>38%</b>	0%	0%	<b>0%</b>	0%	0%	<b>0%</b>

Source: Asunafo North Municipal Assembly, 2022

The sanitation target includes increasing the proportion of households in the municipality with access to safely managed sanitation from 25% in 2022 to 74% midterm and 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 student retention and performance. Similarly, schools offer students opportunities to improve their hygiene, sanitation, and water behaviour. The ANANAD 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 16.

**Table 16** 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
<b>Basic</b>	24.5%	49%	<b>67%</b>	60%	70%	<b>100%</b>	100%	100%	<b>100%</b>
<b>Limited</b>	15.4%	13%	<b>4%</b>	0%	0%	<b>0%</b>	0%	0%	<b>0%</b>
<b>No service</b>	60.1%	37%	<b>29%</b>	40%	30%	<b>0%</b>	0%	0%	<b>0%</b>

Source: Asunafo North Municipal 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 17.

**Table 17** Number of health care facilities with WASH service coverage vision targets

Service Level	2022 Baseline (%)			2026 Midterm Targets (%)			2030 Target (%)		
	Water	Sanitation	Hygiene	Water	Sanitation	Hygiene	Water	Sanitation	Hygiene
<b>Basic</b>	17%	0%	<b>10%</b>	22%	10%	<b>25%</b>	25%	25%	<b>25%</b>
<b>Limited</b>	3%	23%	<b>13%</b>	3%	15%	<b>0%</b>	0%	0%	<b>0%</b>
<b>No service</b>	5%	2%	<b>2%</b>	0%	0%	<b>0%</b>	0%	0%	<b>0%</b>

Source: Asunafo North Municipal Assembly, 2022

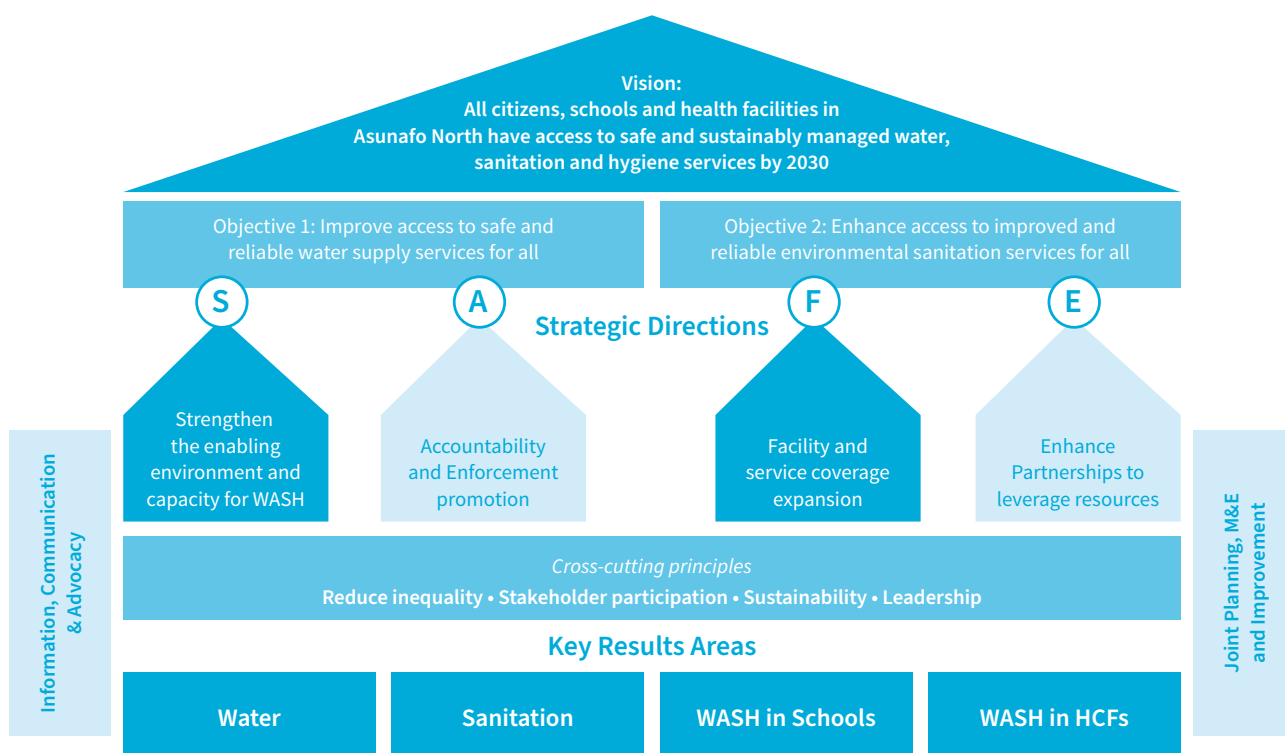


# 5 STRATEGIC DIRECTIONS AND ACTIONS

The ANANAD 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 ANANAD partners will work to achieve the shared vision of ensuring that “All citizens, schools and health facilities in Asunafo North have access to safe and sustainable managed 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** ANANAD 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 ANANAD WASH master plan initiative, summarised as SAFE, are elaborated below.

## 5.1 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 North Municipal Assembly is the highest political, administrative and planning authority at the municipal level and responsible for the overall governance and development of the municipality including WASH service delivery. An analysis of the WASH system showed that although key staff with the requisite qualifications are in place, there is need for targeted sensitisation and training on WASH policy and operational guidelines, WASH monitoring and evaluation (M&E) and reporting, management system and logistics, system/facility management. Reporting on performance in WASH is currently limited to number of facilities serving the population rather than focusing on the level of services delivered.

The revenue generation capacity of the Asunafo North has also improved following the effective implementation of the GIZ-supported IGF initiative to streamline the financial management framework which can be leveraged for WASH infrastructure development. The upgrade of Goaso as a regional capital coupled with its rapid urbanisation makes it imperative for WASH service expansion to meet the demand.

To achieve the shared vision and adopted objectives, the ANANAD partners will contribute to strengthening the WASH-enabling environment at all levels (local, regional and national), targeting relevant institutions and actors in the public and private sectors. Relevant capacities will be strengthened in the public and private sectors, and communities empowered to improve the enabling environment to facilitate the achievement of ANANAD objectives and targets. The key actions relating to this strategic direction are provided in Table 18.

**Table 18** Actions to strengthen the enabling environment and capacity for WASH

Result Areas	Key Actions
<b>Water</b>	<ul style="list-style-type: none"> <li>• Build capacity of Municipal Assembly staff in service monitoring and reporting and other WASH-relevant areas</li> <li>• Intensify public sensitisation drive on planning schemes, development control and service connection regulations and guidelines</li> <li>• Constitute and revamp WSMTs</li> <li>• Build capacity of WSMTs in handpump management</li> <li>• Build capacity of WSMTs in tariffs setting, revenue mobilisation, facility management planning, repairs and maintenance, water quality testing</li> <li>• Build capacity of managers of limited and piped schemes in financial management and water quality testing</li> <li>• Train area mechanics in repairs, maintenance, and water quality testing</li> <li>• Identify, train and certify local plumbers to undertake extensions in urban areas</li> </ul>
<b>Sanitation</b>	<ul style="list-style-type: none"> <li>• Build capacity of Municipal Assembly staff in environmental and sanitation legislations and service monitoring and reporting</li> <li>• Train local artisans in the construction of basic household toilets</li> <li>• Undertake sensitisation drive on sanitation regulations, bye-laws and behavioural change</li> </ul>
<b>WASH in Schools</b>	<ul style="list-style-type: none"> <li>• Monitor to ensure school WASH facilities are properly maintained and operated</li> <li>• Train School Health Coordinators on operations and maintenance of WASH facilities</li> </ul>
<b>WASH in HCFs</b>	<ul style="list-style-type: none"> <li>• Monitor to ensure school WASH facilities are properly maintained and operated</li> <li>• Train Facility IPC Coordinators on operations and maintenance of WASH facilities</li> </ul>
<b>Communications, advocacy and networks</b>	<ul style="list-style-type: none"> <li>• Build local capacity to undertake sensitisation and advocacy to sustain the WASH investments (e.g., at the Client Services Unit and the Information Services Department, WASH Desk)</li> <li>• Provide logistics such as toll-free numbers for receiving customer feedback and connecting people to resources to address common problems</li> </ul>

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

## 5.2 ACCOUNTABILITY AND ENFORCEMENT PROMOTION

The ANANAD 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 Municipal 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 ANANAD 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 19.

**Table 19** Actions to promote accountability and enforcement

Result Areas	Key Actions
<b>Water</b>	<ul style="list-style-type: none"> <li>• Enforce planning schemes and development control regulations</li> </ul>
<b>Sanitation</b>	<ul style="list-style-type: none"> <li>• Enforce sanitation and building regulations and bye-laws</li> </ul>
<b>WASH in Schools</b>	<ul style="list-style-type: none"> <li>• Enforce guidelines for WASH delivery in schools.</li> </ul>
<b>WASH in HCFs</b>	<ul style="list-style-type: none"> <li>• Enforcement of guidelines for WASH delivery in health institutions</li> <li>• Enforce hygiene policy at health care facilities.</li> </ul>
<b>Cross-cutting (System strengthening)</b>	<ul style="list-style-type: none"> <li>• Promote and enforce compliance with the ANANAD mutual accountability framework evident in signed Memorandum of Understanding (MoU) etc.</li> <li>• 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</li> <li>• 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</li> <li>• Establish platforms for coordinating external support for WASH plan implementation (MoUs, joint partner meetings etc.)</li> <li>• Strengthen CSOs' use of existing platforms for citizen engagement on WASH and IWRM</li> <li>• Establish learning alliance platforms to promote learning and uptake of innovations on WASH</li> <li>• Enhance the transparency and social accountability for WASH service delivery</li> <li>• Establish platforms for coordinating external support for WASH master plan implementation (MoUs, joint partner meetings etc.)</li> </ul>

## 5.3 FACILITY AND SERVICE COVERAGE EXPANSION

Under the ANANAD initiative the public and private sectors, civil society organisations, NGOs, and communities will work together to directly expand WASH facilities and service coverage in the municipality. 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 ANANAD 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 20.

**Table 20** Facility and service coverage expansion

Result Areas	Challenges	Key Actions
<b>Water</b>	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 75 boreholes with handpumps. 1b. Construction of 64 additional boreholes with handpumps. 1c. Construction of 47 additional LMBs with 105 public standpipes. 1d. Construction of 1 additional town piped scheme (in Kasapim) and 6 additional small community schemes, with a total of 38 additional public standpipes. 1e. Implement PPPs between the Municipal Assembly and other private organisations including Safe Water Network to construct safe water stations.
	2. Functionality challenges, especially for community-managed handpumps.	2a. Train area mechanics and establish spare parts supply networks to facilitate repair services. 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 13,496 household connections, connecting to small town and small community piped schemes.
	4. Challenges with water availability (reliability) in the Goaso water supply scheme and water quality compliance in all piped schemes except Mim.	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.
<b>Sanitation</b>	1. Prevailing high levels of open defecation in both rural (40%) and urban (34%) areas of the district.	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.
	2. High proportion of rural households (29%) using unimproved, mostly shared, sanitation facilities.	2a. Stimulate and facilitate construction of 16,532 improved toilet facilities with onsite treatment and 231 with offsite treatment in rural areas.
	3. High proportion of urban households (30%) using improved shared facilities.	3a. Stimulate and facilitate construction of 7,363 improved toilet facilities with offsite treatment and 8,449 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.

Result Areas	Challenges	Key Actions
	5. Lack of collection, transportation, 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. Construct waste treatment and recycling plant.
<b>WASH in Schools</b>	1. An estimated 128 schools are without improved water source.	1a. Stimulate and facilitate connection of schools without water supply which are within service area of piped scheme to piped scheme. 1b. Construction of boreholes and limited mechanised borehole systems at schools without improved water sources.
	2. An estimated 80 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 21 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 61 schools do not have handwashing facilities.	4a. Construction of handwashing facilities in schools without handwashing facilities.
<b>WASH in HCFs</b>	1. HCFs without improved water supply within 500 m and 3 without improved water supply on premises.	1a. Construction of boreholes and limited mechanised borehole systems at HCFs without water supply. 1b. Prioritise the 3 HCFs without water from improved source within 500 m.
	2. HCFs without improved sanitation facilities. None of the HCFs have menstrual hygiene facilities, and only 1 has sanitation facilities accessible to people with a disability.	2a. Construction of sex-separated latrines, with MHM facilities and access for people with limited mobility in 2 HCFs. 2b. Ensure availability of MHM facilities in at least 1 latrine per HCF through MHM promotion and education of HCF staff. 2c. Ensure accessibility of at least 1 latrine for people with limited mobility through adjustment of existing facilities or construction of new appropriate ones.
	3. HCFs without handwashing facilities at point of care. 13 HCFs without water or soap within 5 m of latrine.	3a. Construction of handwashing facilities in HCFs without handwashing facilities. 3b. Ensure availability of water and soap at point of care and within 5 m of latrine through training and education of HCF staff and management.
	4. HCFs without solid waste management facilities and 20 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 in HCFs, including three (3) bins for sharp, infectious and non-infectious solid waste. 4b. Facilitate collection and transportation of other waste from health institutions to final disposal site by private sector.
<b>Cross-cutting</b>	1. Reduce inequalities and exclusion in WASH delivery.	1a. Provide WASH facilities to unserved and underserved communities and institutions (schools and HCFs) to reduce inequality in access and reduce vulnerability.
	2. Improve systems/enabling environment for WASH.	2a. Undertake action research to generate new insights to inform WASH service delivery at all levels.

## 5.4 ENHANCING PARTNERSHIPS TO LEVERAGE RESOURCES

The ANANAD 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 ANANAD 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.

## 5.5 RISKS AND MITIGATION

The potential risks to achieving the vision and targets of the ANANAD WASH master plan initiative have been identified, and appropriate mitigation measures put in place to reduce the risks. Table 21 presents the risks and mitigation measures.

**Table 21** 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 Municipal 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 municipality. The Assembly will continue to engage with other development partners and NGOs to jointly implement the WASH master plan.
	Degrading quality of water resources due to illegal lumbering, sand mining and indiscriminate use of agro-chemicals.	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 municipality
	Limited capacity and staff to implement the WASH master plan.	Medium	Assess staff capacity and organise capacity building programmes for the relevant staff (Municipal Assembly, Municipal 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 MUNICIPAL 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 Municipal Assembly (Planning, District Works Department, Finance Officer, Community Development, Environmental Health Assistant, Statistical Service), the Municipal Health Directorate (Director, Disease Control Officers), the School Health Education Programme (SHEP) coordinators of the Ghana Education Service in the Municipality, Ghana Water Company Limited, Rural Relief Services and IRC Ghana. Meetings with wider stakeholders in the Municipal Assembly have provided the platform for building consensus, clarifying the roles and responsibilities and for providing updates. The Municipal Assembly will lead the drive towards mobilising resources and partnerships to implement 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, provide technical backstopping, monitoring and harmonising of reports.
2. Community Water and Sanitation Agency (Ahafo Region) – to collaborate with the Municipal 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, provides technical support and enforces policy and legislative guidelines.
4. Ghana Health Service (Ahafo regional office) - to provide technical support to the Municipal 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 Municipal 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 the progress of the 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 Municipal 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, these development partners and NGOs have been active in the municipality, namely:

1. Cocoa Health and Extension Division (CHED) and other Cocoa Cooperatives providing water facilities in the municipality.
2. Zoomlion Ghana Limited is collaborating with the Municipal Assembly to provide sanitation services.
3. The World Bank, through the Secondary Cities project, is supporting WASH interventions in the municipality.

### 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 (SWN) 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 Municipal 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 organisation, will work with the District Assembly to train district 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 Municipal Assembly to provide simplified water treatment solutions for last mile communities.

## 6.4 CROSS-CUTTING PRINCIPLES FOR EFFECTIVE WASH SERVICE DELIVERY

The cross-cutting principles and actions shown in Table 22 are intended to make WASH service delivery inclusive and enhance knowledge management and learning.

**Table 22** Cross-cutting principles for effective WASH implementation

National Medium-Term Policy Objectives	Principles	Intervention Areas
<p><b>Ensure accessible and quality Universal Health Coverage (UHC) for all.</b></p> <p><b>Promote full participation of persons with disabilities (PWDs) in social and economic development of the country.</b></p>	<ul style="list-style-type: none"> <li>• Minority and marginalised populations identified and prioritised in the application of interventions.</li> <li>• Reduce inequalities and exclusion in the delivery of WASH services.</li> </ul>	<ul style="list-style-type: none"> <li>• Ensure that marginalised communities are prioritised in the intervention required, i.e., adequate water facility, good sanitation facility as a matter of priority.</li> <li>• Provide boreholes with handpumps for unserved communities in remote and poor communities.</li> <li>• Introduce inclusive designs of WASH facilities to cater for the needs of PWDs.</li> </ul>
<p><b>Promote sustainable water resources development and management.</b></p>	<ul style="list-style-type: none"> <li>• Monitor mining and logging activities to ensure they are undertaken in an environmentally sustainable manner.</li> </ul>	<ul style="list-style-type: none"> <li>• Education and awareness creation of the impact of illegal mining on water resources to enhance self-regulation.</li> <li>• Strengthen the involvement of local communities in the management of water resources, forests and wetlands.</li> </ul>



National Medium-Term Policy Objectives	Principles	Intervention Areas
<p><b>Ensure responsive governance and citizen participation in the development dialogue.</b></p>	<ul style="list-style-type: none"> <li>Promote effective stakeholder involvement in planning, public awareness, outreach, monitoring, and accountability.</li> </ul>	<ul style="list-style-type: none"> <li>Strengthen the sub-municipal assembly structures, such as the assembly members and zonal councils, to enhance citizen participation and support for effective WASH delivery.</li> <li>Organise and strengthen communication capacity to listen to issues and drive educational campaigns.</li> <li>Organise radio discussions on the master plan and the related projects and programmes.</li> <li>Utilise all communications channels available within the district to engage constituents in WASH activities and create feedback mechanisms between the government and citizens.</li> <li>Organise town hall meetings and community durbars to engage communities in the master plan and the related projects and programmes.</li> </ul>
<p><b>Strengthen plan preparation, implementation, and coordination at all levels.</b></p> <p><b>Integrate WASH into health programming at all levels.</b></p>	<ul style="list-style-type: none"> <li>Strengthen monitoring and evaluation systems.</li> <li>Reinforce the institutional arrangements with adequate capacity to support and sustain effective monitoring and evaluation.</li> <li>Enhance efficiency and performance at all levels.</li> </ul>	<ul style="list-style-type: none"> <li>Organise routine monitoring and evaluation of the master plan, related Assembly projects and programmes.</li> <li>Enhance the capacity, skills, logistics and knowledge of the staff to provide technical leadership, education and coordination of WASH activities.</li> <li>Harmonise institutional mandates and responsibilities for WASH activities in the municipality.</li> </ul>
<p><b>Strengthen fiscal decentralisation.</b></p>	<ul style="list-style-type: none"> <li>Promote evidence-based decision-making at all levels.</li> <li>Strengthen capacity for data management and surveillance.</li> </ul>	<ul style="list-style-type: none"> <li>Broaden the WASH team in the municipality to include other departments with shared goals.</li> <li>Share information on WASH with stakeholders for evidence-based decision-making.</li> <li>Develop a systemic methodology to track, analyse and communicate on WASH services.</li> </ul>

# 7 COMMUNICATION, ADVOCACY AND NETWORKS

The Communication, Advocacy and Network Strategy is a critical component of the WASH master plan for the Asunafo North Municipal 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

The communication and advocacy strategy outlined for the WASH master plan of the Asunafo North Municipal Assembly focuses on social learning, evidence-based approaches, and advocacy for change, which are crucial for achieving the objectives of the plan.

The plan's communication activities aim to both to create awareness of the master plan and engage local actors in improved WASH-related behaviours and attitudes.

Collaboration between different organisations and stakeholders is crucial for ensuring the successful implementation of the plan and achieving its objectives. The publicising of the master plan strategic activities and events through the local media and sharing with wider sector stakeholders are also essential activities. This helps to raise awareness of the plan's objectives and achievements, and garner support from a broader audience.

The periodic communication of work plans, progress, achievements, and lessons learnt is a critical component of the communication and advocacy strategy. The highlighting of challenges and constraints impacting the successful implementation of the full coverage plan activities is also essential for ensuring the plan's successful implementation.

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.

### 7.1.1 TARGET AUDIENCES

The primary audiences are at the core of the Master Plan Communication plan, while secondary audiences help bridge certain gaps and extend the outreach scale, as shown in Table 23.

**Table 23** Audience analysis for communication

Primary audiences	Secondary audiences
Municipal Chief Executive	Ghana Health Service
Heads of Department and Agencies in the Municipal 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 municipality
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:

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

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

1. Face-to-face meetings
2. Radio
3. Website
4. Social media (Facebook, Twitter etc.)
5. Video and television (TV) newspapers
6. Community durbars
7. Town Hall meetings
8. National government WASH awareness campaigns
9. Public Relations and Complaints Committee
10. 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 for 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 municipality.
- 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 bridge certain gaps and extend the outreach scale, as shown in Table 24.

**Table 24** 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 Municipal 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 municipality
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:

1. Announcements, discussions, and broadcasts in local news media, e.g., local FM station, local newspapers, and Assembly's website, social media, and newsletters.
2. Meetings with traditional authorities, representatives of Zonal Councils and other opinion leaders and tasking them to take the messages back to their communities.
3. Holding community meetings at central locations throughout the municipality.

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

1. Face-to-face meetings
2. Radio
3. Websites
4. District and other WhatsApp groups
5. Routine SMSs
6. Toll free numbers
7. Community Information Centres
8. District Assembly Meetings
9. Social media (Facebook, Twitter etc.)
10. Video and television (TV) newspapers
11. Community durbars
12. Town Hall meetings
13. Information vans

### 7.3 KEY MESSAGES

There will be specific messages tailored to each target audience. For the stakeholders in the Asunafo North Municipal Assembly, the messages developed will aim to promote active participation and accountability, and garner stakeholder support for local development interventions. The intervention areas and the focus of the messages are listed in Table 25.

**Table 25** Social Behaviour Change Communication (SBCC) messages for WASH interventions

Intervention Area	Key Behaviour Change Messages
<b>Personal Hygiene (Handwashing with soap under running water)</b>	<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"> <li>1. Before preparing, serving food and eating.</li> <li>2. Before feeding babies/before breastfeeding, before feeding little children.</li> <li>3. After latrine use, also after disposing of little children's faeces.</li> <li>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.</li> <li>5. Wash your dishes with clean water and soap.</li> </ol>
<b>Safe Handling and Storing of Drinking Water</b>	<p><i>Keep drinking water safe:</i></p> <ol style="list-style-type: none"> <li>1. Keep all water sources free from contamination.</li> <li>2. Collect water in a clean and safe container.</li> <li>3. Wash your hands after having collected water once you reach home.</li> <li>4. Keep water drawing and storage containers clean and covered.</li> <li>5. Use a clean glass/ cup when drinking water.</li> </ol> <p><i>If the water is dirty, there are some options to clean this water:</i></p> <ol style="list-style-type: none"> <li>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.</li> <li>2. After pouring the water through the cloth, boil or treat it.</li> <li>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.</li> </ol>

Intervention Area	Key Behaviour Change Messages
<b>Ensure a Safe and Hygienic Environment</b>	<ol style="list-style-type: none"> <li>1. Keep your home and surrounding environment clean.</li> <li>2. 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.</li> <li>3. Always cover your pit latrine after use.</li> <li>4. Properly dispose of rubbish in a pit /designated disposal site.</li> <li>5. Avoid keeping animals in the house. Provide separate accommodation for animals.</li> <li>6. Manage drains and toilets, including leakages of septic tanks, to minimise the risk of a continuously contaminated environment.</li> <li>7. 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).</li> <li>8. Encourage larvae control, including insecticide treatment of larvae breeding sites (oncho).</li> </ol>
<b>ODF</b>	<ol style="list-style-type: none"> <li>1. Always use a latrine.</li> <li>2. Always cover your pit latrine after use.</li> <li>3. Throw all faeces, including baby's faeces, into a pit latrine.</li> <li>4. Do not defecate in the open at any time.</li> </ol>
<b>Menstrual Hygiene</b>	<ol style="list-style-type: none"> <li>1. Do not throw away used pads in the open.</li> <li>2. Put any used pads into a refuse container.</li> </ol>
<b>Hygiene in School</b>	<ol style="list-style-type: none"> <li>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.</li> <li>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.</li> <li>3. Keep and maintain a safe and clean environment throughout the school.</li> </ol>

# 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 Municipal 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 municipality 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 26 shows the policy objectives, indicators, monitoring frequency and who is responsible, focusing on key thematic areas.

**Table 26** Monitoring and evaluation framework

Focus Area	National policy objective	Indicators for measurement	Monitoring Frequency	Responsibility
<b>Water services</b>	Improve access to safe and reliable water supply services for all	<ul style="list-style-type: none"> <li>Proportion of population with access to safely managed drinking water</li> <li>Proportion of population with access to basic drinking water</li> </ul>	Annually	Municipal Planning and Coordination Unit / Municipal Environmental Health Unit
<b>Sanitation and hygiene services</b>	Enhance access to improved and reliable environmental sanitation services	<ul style="list-style-type: none"> <li>Proportion of population with access to basic sanitation services</li> <li>Proportion of population practising open defecation (number of communities achieving open defecation-free (ODF) status)</li> <li>Proportion of population with access to handwashing facility with soap and water</li> <li>Proportion of solid waste properly disposed of (major towns/cities)</li> <li>Proportion of population whose liquid waste (faecal matter) is safely managed</li> </ul>	Annually	Municipal Planning and Coordination Unit / Municipal Environmental Health Unit



Focus Area	National policy objective	Indicators for measurement	Monitoring Frequency	Responsibility
<b>WASH in Schools</b>	Enhance inclusive and equitable access to, and participation in quality education at all levels	Proportion of schools with access to basic WASH services	Annually	Municipal Planning and Coordination Unit/ School Health Education Programme- Ghana Education Service
<b>WASH in Health Care Facilities</b>	Ensure accessible and quality Universal Health Coverage (UHC) for all	Proportion of health care facilities with access to basic WASH services	Annually	Health Directorate/ Municipal 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 municipality 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 municipality. 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 municipality. The feedback will 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 documenting and sharing lessons, best practices, and new insights. The sharing will be done using existing platforms:

- a. Stakeholder meetings to coordinate and review the implementation of the WASH master plan.
- b. Town Hall meetings to discuss and generate feedback on the performance of the implementation of the WASH master plan.
- c. Other regional and sector events.
- d. Print and electronic media: Municipal 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 municipality. 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 Municipal 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 and system strengthening.

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

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 27.

**Table 27** Costing assumptions (in USD)

	CapEx (USD)	Expected lifespan	Expected number of people served	CapManEx (one-off)	CapManEx (USD per year)	OpEx (USD per Year)
<b>Costs of construction of additional facilities</b>						
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 handpump	7,000	20	300		350	120
<b>Costs of handpump repairs (for currently broken-down boreholes)</b>						
Handpump installation on existing borehole				500		
Handpump repair				100		
Complete rehabilitation				1200		

Table 28 presents the number of facilities that are to be constructed and rehabilitated as per the master plan.

**Table 28** Number of facilities to be constructed and currently broken-down facilities to be rehabilitated

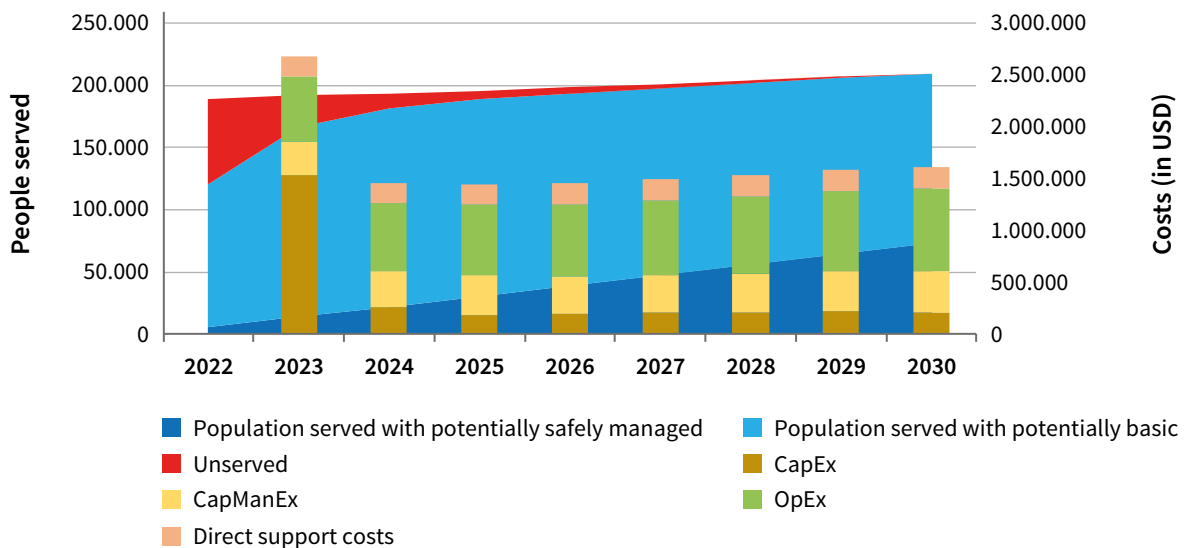
	2023	2024	2025	2026	2027	2028	2029	2030	Total facilities
<b>Additional facilities to be constructed</b>									
Additional Town piped schemes	1	0	0	0	0	0	0	0	<b>1</b>
Additional Small community piped schemes	6	0	0	0	0	0	0	0	<b>6</b>
Additional number of household connections	1687	1687	1687	1687	1687	1687	1687	1687	<b>13496</b>
Additional PS standpipes	38	0	0	0	0	0	0	0	<b>38</b>
Additional LMBs	33	13	0	0	1	0	0	0	<b>47</b>
Additional LMB SP	78	26	0	0	1	0	0	0	<b>105</b>
Additional HPs to be constructed	23	9	4	8	3	7	10	0	<b>64</b>
<b>Currently broken-down facilities to be rehabilitated</b>									
Handpump installation on existing borehole	0	1	1						
Handpump repair	6	9	9						
Complete rehabilitation	14	7	27						

Table 29 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 29** Cost estimates for water service delivery (in USD)

	2023	2024	2025	2026	2027	2028	2029	2030	Total (2023-2030)	Average per person per year (2022-2030)
CapEx	1,529,035	264,907	189,588	200,678	205,771	211,467	222,238	213,704	3,037,388	1.94
CapManEx	331,330	338,310	377,373	351,193	362,227	373,595	385,541	397,107	2,916,676	1.82
OpEx	626,817	655,827	680,878	702,385	724,454	747,190	771,082	794,214	5,702,847	3.56
Direct support costs	191,605	192,950	195,639	198,373	201,136	203,930	206,780	209,665	1,600,078	1.00
<b>Total</b>	<b>2,678,787</b>	<b>1,451,994</b>	<b>1,443,479</b>	<b>1,452,629</b>	<b>1,493,587</b>	<b>1,536,182</b>	<b>1,585,641</b>	<b>1,614,690</b>	<b>13,256,989</b>	<b>8.32</b>

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

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 all four piped schemes, but only the Akrodie and Goaso schemes were able to provide data on revenue and expenditure, with revenue amounting to 37,000 and 331,930 GHC and expenditure amounting to 35,000 and 196,000 GHC for Akrodie and Goaso respectively. Part of the

revenues are supposed to be set aside to cover capital expenditure related to capital maintenance and expansion. However, revenues may be insufficient to cover future costs of expansion (CapEx) and major repairs, rehabilitation and renewal (CapManEx). 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 12 handpump WSMTs that were able to provide data on annual revenues, the reported revenues varied widely, from 450 GHC to 7000 GHC per year, with an average of 2871 GHC per year, which on average would be sufficient to cover the 120 USD required for OpEx (using exchange rates at the time of data collection). However, currently, only a tenth (10%) of the 183 (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.**

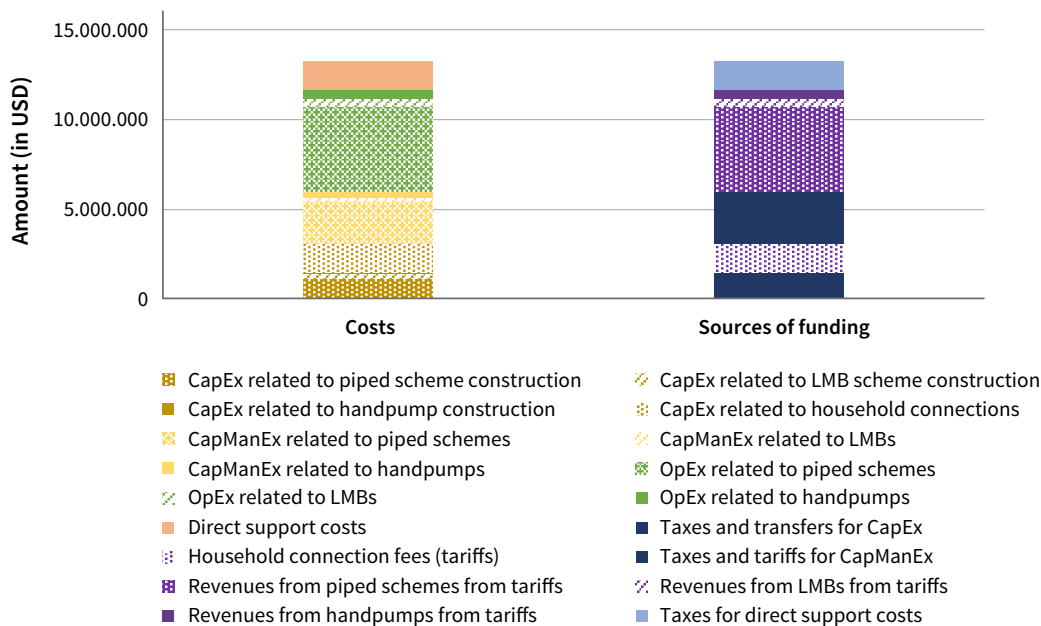
As asset holder of handpumps on boreholes, **local government is responsible for CapManEx of handpumps.** In order to take up this role, it needs to have asset management systems in place, in order to plan for and ensure funding for asset repairs, rehabilitation and replacement over time.

Table 30 presents an overview of the expected sources of funding. It shows that overall, taxes and transfers are expected to cover a major part of costs, but that also a considerable part of the costs (55%) are to be paid for by users through tariffs.

**Table 30** Sources of funding

Sources of funding	Expected amount covered (USD)	% of total
<b>Taxes and transfers</b>	4,408,923	33%
<b>Taxes</b>	1,600,078	12%
<b>Tariffs (household connection fees)</b>	1,545,141	12%
<b>Tariffs (payment for water services)</b>	5,702,847	43%

Figure 18 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 water services

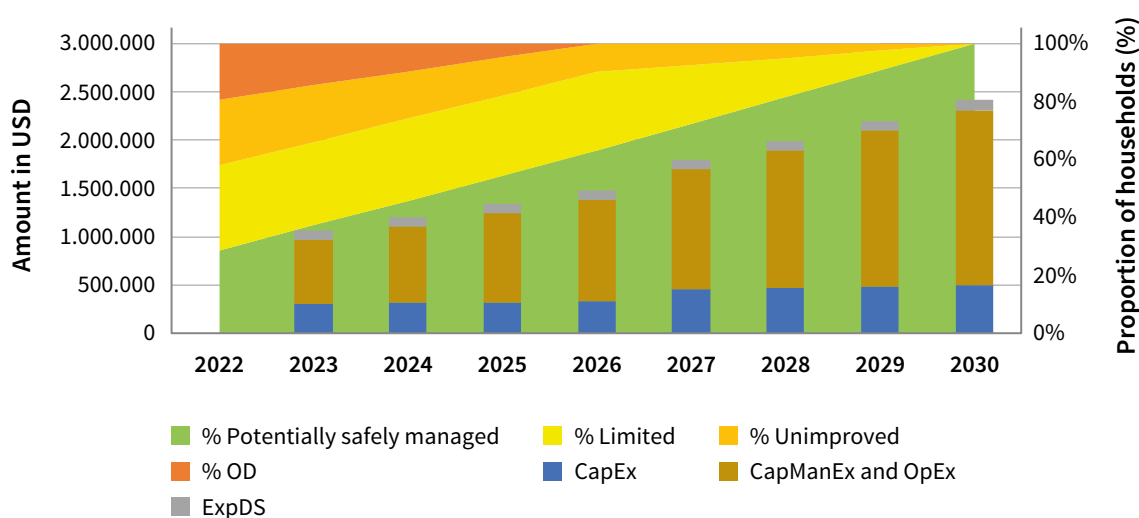
## 9.2 SANITATION SERVICES

### 9.2.1 COSTING

A breakdown of the estimated cost required to achieve the sanitation targets is provided in Table 31.

**Table 31** Cost estimates for sanitation service delivery

Year	2023	2024	2025	2026	2027	2028	2029	2030	Total (2023-2030)	Total per person per year
CapEx	662,970	680,880	699,050	718,060	513,410	526,810	540,210	554,830	<b>4,896,220</b>	<b>4</b>
CapManEx and OpEx	1,005,400	1,286,400	1,574,900	1,871,250	2,080,200	2,294,600	2,514,450	2,740,250	<b>15,367,450</b>	<b>12</b>
ExpDS	154,433	156,595	158,787	161,010	163,265	165,550	167,868	170,218	<b>1,297,727</b>	<b>1</b>
<b>Total</b>	<b>1,822,803</b>	<b>2,123,875</b>	<b>2,432,737</b>	<b>2,750,320</b>	<b>2,756,875</b>	<b>2,986,960</b>	<b>3,222,528</b>	<b>3,465,298</b>	<b>21,561,397</b>	<b>17</b>



**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.

# REFERENCES

Asunafo North Municipal Assembly (2022). Medium-Term Development Plan (draft-unpublished, dated February 2022)

Asunafo North Municipal Assembly (2022). Water Service Monitoring Baseline Report (unpublished)

Esteves Mills & Cumming, SHARE (2016). The impact of water, sanitation and hygiene on key health and social outcomes: a review of the evidence

Ghana Statistical Service (2021). 2021 Population and Housing Census General Report Vol 3A Population of Regions and Districts

Global Handwashing.org (2020). Key-hygiene promotion messages for hygiene promoters and volunteers for refugees and host communities. Available at: [Coronavirus disease \(COVID-19\) WASH key messages\\_ENG.docx \(globalhandwashing.org\)](#)

Ministry of Finance, Ghana (2021). 2022-2025 Budget Preparation Guidelines

Ministry of Health, Ghana (2020). National Health Policy: Ensuring healthy lives for all.

Ministry of Health, Ghana (2014). Health Sector Medium Term Development Plan 2014-2017

Ministry of Water Resources Works and Housing (2014). Water Sector Strategic Development Plan (2012-2025). MWRWH, Accra

National Development Planning Commission (2018). Ghana SDGs Indicator Baseline Report

National Development Planning Commission (2021). National Medium-Term Development Policy Framework 2022-2025

SNV (2016). Behaviour Change Communication Guidelines

UNICEF (2016). Strategy for Water, Sanitation and Hygiene 2016–2030

United Nations Children’s Fund (UNICEF) and World Health Organization (WHO), (2022). Progress on drinking water, sanitation, and hygiene in Africa 2000-2020: Five years into the SDGs. New York, Geneva

Water Resource Commission (2012). Pra basin: Integrated Water Resource Management Plan. WRC, Accra

World Health Organization (2020). Global progress report on water, sanitation, and hygiene in health care facilities: fundamentals first. Geneva

