MINISTRY OF SANITATION
AND WATER RESOURCES

Ghana WASH Sector Development Programme (GWASHSDP) 2021-2030

Ghana WASH Sector Development Programme (GWASHSDP) 2021-2030

Foreword

The Ghana Water Supply, Sanitation and Hygiene Sector Development Programme (GWASHSDP), which also includes Water Resources Development and Management, derives inspiration from our national Water, Sanitation and Hygiene policy documents and strategies as well as the country's commitments to National, Regional and Global Vision, Goals and Targets. As a government, we are deeply committed to ensuring that our water resources, both surface and underground, are sustainably managed to support our domestic, agricultural, energy and industrial transformation agenda to become a full middle-income country by 2030. This, therefore, means an integrated water resources management, increased access to basic sanitation services and improved hygiene practices are strictly adhered to by all sector stakeholders to ensure that water resources serve our collective desire as a catalyst for positive socio-economic transformation of our motherland for the present and future generations.

We are pleased that today, we have collectively prepared a comprehensive national WASH programme with active participation of sector stakeholders from government agencies, development partners, private sector, civil society groups (including faith-based ones) and the media at the national and sub-national levels. We hope this partnership and high-level of participation from all actors will be sustained in all future endeavours including the planning, implementation, monitoring and evaluation of the Ghana Water Supply, Sanitation and Hygiene sector Development Programme.

The provision of sustainable Water Supply, improved Sanitation and Hygiene (WASH) services to all Ghanaians, irrespective of one's physical location and socio-economic circumstances is at the heart of every strategy and action we embark on and

continue to pursue. Our primary goal is to stop open defaecation and ensure basic sanitation service to all by 2030; and continuously work towards safely managed sanitation service by 2040. This vision requires collective commitment and sustained actions from all, especially, various service providers, local government authorities, government, civil society and development partners. The GWASHSDP provides an overview of Ghana's WASH status; key actors and their respective roles and responsibilities; the policy, institutional, and legal framework; and the key challenges confronting sector performance. In addition, summaries of priority actions necessary to resolve key challenges in the sector are provided, which includes regulatory and policy frameworks each actor needs to be abreast with. All stakeholders are required to use the GWASHSDP to guide WASH activities, projects, and programmes in Ghana.

The Ministry of Sanitation and Water Resources wishes to

extend its sincere appreciation to the World Bank for funding the engagement process and all other development partners and indeed all sector actors for demonstrating a lot of commitment towards the development of the GWASHSDP. The COVID-19 pandemic has taught us all to see water as life, sanitation as dignity, and hygiene as health. We, therefore, need to work together to make sustainable and affordable WASH services a reality for all in our country Ghana.

Hon. Cecilia Abena Dapaah
Minister for Sanitation and Water Resources, Ghana

Acknowledgements

The Ministry of Sanitation and Water Resources (MSWR) is grateful to the World Bank for funding the development of the Ghana WASH Sector Development Programme (GWASHSDP). The Ministry would like to acknowledge the roles of the following, who supported this exercise by providing information and data, participating in stakeholder workshops and key informant interviews, and also reviewing the draft documents, which have all contributed positively to the final programme document: various sector agencies (including the Water Resources Commission (WRC), Ghana Water Company Limited (GWCL), and the Community Water and Sanitation Agency (CWSA); the National Development Planning Commission (NDPC); the World Bank; the United Nations Children's Fund (UNICEF); entities in other sectors, including the ministries of Education, Health, Local Government Decentralisation and Rural Development, the Food and Drugs Authority (FDA), the Public Utilities Regulatory Commission (PURC), the Ghana Standards Authority (GSA), the National Disaster Management Organisation (NADMO), the Office of the Head of Local Government Service (OHLGS), various Regional Coordinating Councils (RCCs) in all 16 regions of the country, Metropolitan, Municipal, and District Assemblies (MMDAs) across the country, the International Water and Sanitation Centre (IRC), the Coalition of WASH NGOs (CONIWAS), Global Communities, WaterAid Ghana (WAG), Water and Sanitation for the Urban Poor (WSUP) Ghana, civil society, and all other organisations and projects which supported this process, including Greater Accra Metropolitan Area (GAMA) Sanitation and Water Project, Greater Accra Sustainable Sanitation and Livelihoods (GASSLIP) Project the Environmental Service Providers Association, ZoomLion, and other actors in the private sector.

We hope that all the sector actors at the national and sub-national levels will sustain this spirit of working together to ensure that the strategic objectives set in this national programme are achieved, so that we can establish vibrant, well-coordinated, and integrated water resources management practices and deliver sustainable and affordable water, sanitation and hygiene (WASH) services to all people in Ghana by 2030.

The MSWR is deeply indebted to all members of the Technical Working Group for playing an active role in the preparation of the programme. Finally, the Ministry would like to express its sincere appeciation to the consulting team who played a key role in developing this programme, namely: Dr John Pinfold and Dr Peter Burr from Oxford Policy Management (OPM) and Prof. Kwabena Biritwum Nyarko, Dr Eric Ofosu Antwi, Dr Bismark Dwumfour-Asare, Dr Eugene Appiah-Effah, and Mr Yaw Asante Sarkodie from BEEK Consult Limited, Ghana.

Executive summary

The Ghana Water, Sanitation and Hygiene Sector Development Programme (GWASHSDP) 2021-2030 provides the framework for inclusive sector planning, implementation, monitoring and evaluation, and reporting for sustainable and universal water supply, sanitation, and hygiene (WASH) services. The main purpose of the programme is to provide a framework for coordinated implementation of activities to achieve national, regional (Africa), and global visions, goals, and targets for integrated water resources management and sustainable WASH services for everyone everywhere in Ghana by 2030. Specific objectives include: a) ensuring that efforts to deliver WASH services are well-coordinated in order to achieve national, regional, and global goals and targets; b) addressing key sector challenges that limit the provision and sustenance of WASH services and the conservation of water resources, through strategic planning, institutional development, and system strengthening; c) encouraging wider stakeholder participation in the planning, implementation, monitoring, and reporting processes in water resources management, WASH service delivery and management; d) prioritising neglected components that require more attention to ensure WASH services bring about positive and sustainable behaviour changes in safe WASH practices; and e) ensuring accountability and transparency through monitoring, evaluation, and reporting in the WASH sector. The key target is to achieve at least universal basic WASH services by 2030, and to progressively increase the proportion of the population that are able to access and use safely managed services.

In developing this programme, various sector policies, programmes, strategies, and projects were reviewed; lessons learned were reflected upon and embedded in the programme. Also, Ghana's commitments to regional (in Africa) and international goals and targets (e.g., the Sustainable Development Goals (SDGs), and Sanitation and Water for All) guided the strategic focus and direction. Various participatory approaches, such as inclusive stakeholder workshops and key informant interviews were carried out at the national and sub-national levels. Stakeholders from government agencies, development partners, the private sector, civil society groups, including faith-based organisations, non-governmental organisations (NGOs), and community-based organisations (CBOs), actively participated in the workshops that were organised. The leadership of the Ministry of Sanitation and Water Resources (MSWR) led the entire programme preparation processes. And the National Development Planning Commission (NDPC) guided the entire process, to ensure that the GWASHSDP is in line with Ghana's National Medium-Term Development Policy Framework (NMTDPF) and other strategic national development planning processes and/or documents. The aim is to make the national programme simple, realistic, and achievable, as well as to emphasise results that will positively transform water resources management and WASH services delivery in Ghana.

This document presents the following information: an overview of Ghana's WASH status; key actors and their respective roles and responsibilities; the policy, institutional, and legal framework; and the key challenges confronting sector performance. In addition, summaries of priority actions necessary to resolve key challenges in the sector are provided. This programme document serves as both an information pack and a guide on how to transform the WASH sector to achieve common national and international targets by 2030.

The GWASHSDP has six key components. The first two components are: 1) water resources management and water supply for both urban and rural areas; and 2) environmental sanitation,

covering liquid and solid waste, and hygiene (handwashing with soap at critical moments), safe hygienic management and disposal of human excreta, cleanliness of sanitation facilities, safe domestic water management from source to point of consumption, menstrual hygiene management (especially in schools), and other context-specific hygiene behaviours (such as face-washing, liquid and solid waste management, and cleanliness of household environments). The remaining components are: 3) WASH in institutions (schools and healthcare facilities), WASH in emergencies, and cross-cutting issues (including equity, and inclusion, gender, and climate change); 4) institutional development and sector strengthening (institutional arrangements, capacity development –including Schools of Hygiene, sector financing, sector planning, and sector learning and knowledge management); 5) the management and organisation of the GWASHSDP (programme management arrangements, programme review, and adjustments, financial management, communication strategy, risks, and mitigation measures); and 6) the cost of the programme – which covers the cost of all of the components.

This document sets out (for each component): situational analyses of the policy, legal, and regulatory framework; and key challenges that inhibit high performance in the WASH sector, and the corresponding priority actions required to resolve the challenges.

The ultimate desire is for Ghana to achieve the relevant national, regional, and international goals and targets in the WASH sector through 'unity of purpose' among all sector actors – public, private, NGO, and the general public. For instance, on water resources management, the programme outlines the collective efforts that are necessary to reduce man-made actions that affect the quantity and quality of both surface and underground water resources in the country (which ultimately culminate in high production costs for water supply for domestic use). The programme also outlines the priority actions for that sub-sector, to ensure adequate and quality water resources for current and future needs for all uses – domestic, agricultural, industrial, and energy. Active stakeholder participation at all levels (national and sub-national) in sector planning, programming, learning, and knowledge management are emphasised. In addition, as the programme sets out, conscious efforts need to be made to strengthen inter- and intra-governmental and non-state actor coordination, harmonisation, and alignment for a sustainable and vibrant sector. Equally, emphasis is placed in the programme on behavioural changes relating to hygiene promotion, accountability, and transparency at all levels of programme management.

To achieve the overall objectives and targets of the GWASHSDP, the leadership and coordination roles of the sector ministry (MSWR) and agencies (including Metropolitan, Municipal, and District Assemblies (MMDAs)) must be strengthened to promote collaboration and/or partnerships among actors at both national and sub-national levels. The following five building blocks are to be established to ensure a vibrant WASH sector: a) sector policy and strategy covering all sub-sectors; b) institutional arrangements to promote effectiveness and efficiency; c) sector financing; d) planning, monitoring, review, and reporting; and e) capacity development. For instance, the three Schools of Hygiene, now under MSWR, will be supported to play their critical role in supplying the requisite skilled manpower needs of the environmental sanitation sub-sector. Thus, the curricula of the schools need to be reviewed to respond to the contemporary needs and challenges of the sector. Also, the infrastructure and other resource needs (including competent staff) of the schools should be addressed as soon as possible. Sector strengthening activities will include improving the competence and skills of staff at all levels; and providing the required resources (e.g., logistics – computers, motor bikes, and vehicles etc.), which must be budgeted for in annual workplans and new project designs. Between 10% and 15% of sector budgets should be devoted to sector strengthening, institutional development, and human resources development activities. Innovative and increased sector financing arrangements from both on-budget (government) and off-budget allocations (from NGOs, the private sector, households, and faith-based organisations), as well as internally generated funds of MMDAs, should be advocated for at all levels.

The estimated annual cost to achieve the targets set in the GWASHSDP are as follows: US$ 8 million for water resources management; US$ 420 million for urban water supply; US$ 350 million for rural and community water supply; US$ 800 million for sanitation (US$ 700 and US$ 100 million for urban and rural areas, respectively); US$ 60 million for hygiene; and another US$ 60 million for systems strengthening and institutional development. Thus, about US$ 1.7 billion is needed annually for programme implementation to achieve the SDG target by 2030.

The annexes contain a description of the policy, legal, and regulatory framework **(Annex A)**; costed implementation plan **(Annex B)**; and guidelines for WASH planning, monitoring and reporting **(Annex C)**.

Table of contents

Foreword		ii
Acknowledgements		iv
Executive summary		v
List of tables, figures, and boxes		x
List of abbreviations		xiii
1	**Introduction**	**1**
	1.1 Purpose of the GWASHSDP	1
	1.2 Evolution of WASH sector policy and strategies	1
	1.3 Preparation of the GWASHSDP	2
	1.4 What is new in the GWASHSDP?	4
	1.5 How to use the GWASHSDP	5
	1.6 Organisation of the GWASHSDP	5
2	**Current WASH situation**	**7**
	2.1 Policy, legal, and regulatory framework	7
	2.2 Institutional arrangements	13
	2.3 Sector coordination and collaboration	16
	2.4 Current WASH coverage	17
	2.5 Summary of key sector constraints	23
3	**Programme outline 2023–2030**	**26**
	3.1 WASH sector vision and targets	26
	3.2 Programme components	27
	3.3 Underlying assumptions for achieving the GWASHSDP targets	27
4	**Water resources and water supply**	**31**
	4.1 Water resources management	31
	4.2 Urban water supply	35
	4.3 Rural/community water supply	40
5	**Environmental sanitation**	**47**
	5.1 Liquid waste management	47
	5.2 Solid Waste Management (SWM)	58
	5.3 Hygiene	61
6	**WASH in institutions and cross-cutting issues**	**77**
	6.1 WASH in Schools (WinS)	77
	6.2 WASH in healthcare facilities	81

6.3 WASH in emergencies 85
6.4 Equity and inclusion 87
6.5 Gender 89
6.6 Climate change 91
7 Institutional development and sector strengthening 95
7.1 Institutional arrangements 95
7.2 Capacity development 99
7.3 Sector financing 100
7.4 Sector planning 103
7.5 Sector learning and knowledge management 106
8 Management and organisation of the programme 107
8.1 Programme management arrangements 107
8.2 Programme review and adjustments 109
8.3 Financial management 111
8.4 Communication strategy 111
8.5 Risks and assumptions for the programme measures 112
9 Cost of the programme 115
9.1 Cost of WASH in urban areas 115
9.2 Cost of WASH in rural areas 116
9.3 Cost of the other components 116

Annex A Policy, legal, and regulatory framework 118
Annex B Implementation plan 134
Annex C Guidelines for WASH planning, monitoring, and reporting 142

List of tables, figures, and boxes

Table 1: Timeline of WASH policies and plans 2
Table 2: Key WASH sector policies 8
Table 3: Laws establishing WASH organisations 9
Table 4: WASH sector regulations 10
Table 5: Summary of Institutional mandates 13
Table 6: Sector coordination platforms 16
Table 7: Coverage of WASH service levels 17
Table 8: Sources of funding for WASH service delivery 22
Table 9: Funding scenarios and targets 27
Table 10: IWRM indicators for the planning period 31
Table 11: IWRM key challenges and priority actions 33
Table 12: Urban water supply targets for the sector 35
Table 13: The SDG definition for water supply service levels 36
Table 14: Urban water supply service level criteria and standards 36
Table 15: Key challenges and priority actions for urban water supply 38
Table 16: Rural water supply targets for the sector 40
Table 17: Rural water supply service level criteria and standards 41
Table 18: Key challenges and priority actions for rural water supply 43
Table 19: Distribution of sanitation technologies in Ghana 49
Table 20: Service levels and targets for sanitation in Ghana 50
Table 21: SDG definitions for sanitation service levels 51
Table 22: Standards and criteria for household sanitation 22
Table 23: Institutional roles and responsibilities for environmental sanitation sub-sector 53
Table 24: Priority actions for key challenges in the liquid waste management sub-sector 54
Table 25: Priority actions to address key challenges in SWM 59
Table 26: Hygiene service levels and targets in the GWASHSDP 63
Table 27: SDG definitions for hygiene – handwashing with water and soap 63
Table 28: Priority actions to address key challenges for handwashing with soap 64
Table 29: Service levels and targets for safe disposal of faeces 66
Table 30: Priority actions to address key challenges for safe disposal of faeces 67
Table 31: Service levels and targets for HWTS 68
Table 32: HWTS service levels description 68
Table 33: Priority actions to address key challenges for HWTS 69
Table 34: Description of institutions and their roles and responsibilities for MHM 71

Table 35: Priority actions to address key challenges for MHM 72
Table 36: Levels of service and targets for WASH in schools 78
Table 37: Service levels and indicator proxies for MHM in schools 79
Table 38: Key actions to address challenges identified in the WinS sub-sector 79
Table 39: Levels of service and targets for WASH in healthcare facilities 82
Table 40: Description of levels of service 40
Table 41: Priority actions for key challenges associated with WASH in healthcare facilities 83
Table 42: Priority actions to address identified challenges for WASH in emergencies 86
Table 43: Priority actions to address identified challenges for equity and inclusion 87
Table 44: Priority actions for challenges associated with gender in WASH 89
Table 45: Key challenges and priority actions for climate change challenges in WASH 91
Table 46: Key challenges and priority actions for institutional development 96
Table 47: Funding challenges and proposed solutions 100
Table 48: Key challenges in planning, budgeting, and reporting 105
Table 49: Learning platforms and required priority actions 106
Table 50: Key challenges and priority actions on general management 108
Table 51: Priority actions for programme review 110
Table 52: Challenges faced by sub-sector information systems 110
Table 53: Risks and assumptions 112
Table 54: Estimated annual cost for achieving Scenario 1 117
Table 55: Policy, legal, and regulatory framework for water resource management 118
Table 56: Summary of policy, legal, and regulatory framework for urban water supply 120
Table 57: Summary of policy, legal, and regulatory framework for rural water supply 121
Table 58: Key policy, legal, and regulatory documents for sanitation sub-sector 123
Table 59: Policy and legal framework for SWM 126
Table 60: Policies and strategies on handwashing 128
Table 61: Key legislation, policies, strategies, manuals, and guidelines on faeces disposal 129
Table 62: Strategies on HWTS 129
Table 63: Policy, legal, and regulatory framework for WinS 130
Table 64: WASH in healthcare facilities institutional framework 132

Figure 1: Policy, legal, and regulatory framework 7
Figure 2: Stakeholders and institutions in the WASH sector 15
Figure 3: Rural and urban sanitation service levels 20
Figure 4: Spatial equity –sanitation 21
Figure 5: Spatial equity – water supply 21
Figure 6: Sanitation access by wealth quintiles 21

Figure 7: Liquid waste management value chain 48
Figure 8: GWASHSDP links to national planning processes 104
Figure 9: GWASHSDP links to sub-national planning processes 104
Figure 10: Capital costs to reach unserved population in urban areas (US$ million) 115
Figure 11: Capital costs to reach unserved population in rural areas (US$ million) 116

Box 1: What's new in the GWASHSDP? 5

List of abbreviations

BaSIS	Basic Sanitation Information System
CAPEX	Capital expenditure
CHPS	Community-Based Health Planning and Services
CLTS	Community-led Total Sanitation
CONIWAS	Coalition of Non-Governmental Organisations in Water and Sanitation
CWSA	Community Water and Sanitation Agency
CWSP	Community Water and Sanitation Policy
DA	District Assembly
DACF	District Assembly Common Fund
DEOC	District Education Oversight Committee
DESSAP	District Environmental Sanitation Strategy and Action Plan
DiMES	District Monitoring and Evaluation System
EHSD	Environmental Health and Sanitation Directorate
EHU	Environmental Health Unit
EMIS	Educational Management Information System
EPA	Environmental Protection Agency
ESICApp	Expanded Sanitary Inspection Compliance Application
ESP	Environmental Sanitation Policy
FDA	Food and Drugs Authority
FSM	Faecal Sludge Management
FSTP	Faecal Sludge Treatment Plan
GAMA	Greater Accra Metropolitan Area
GES	Ghana Education Service
GHS	Ghana Health Service
GMA	Ghana Meteorological Agency
GSA	Ghana Standards Authority
GSS	Ghana Statistical Service
GWASHSDP	Ghana WASH Sector Development Programme
GWCL	Ghana Water Company Limited
HeFRA	Health Facilities Regulatory Agency
HWTS	Household Water Treat and Storage
IGF	Internally Generated Funds
IWRM	Integrated Water Resources Management
JMP	Joint Monitoring Programme

JSR	Joint Sector Review
LI	Legal Instrument
MDAs	Ministries, Departments, and Agencies
MDG(s)	Millennium Development Goal(s)
MDHD	Metropolitan/Municipal & District Health Directorates
MHM	Menstrual Hygiene Management
MICS	Multiple Indicator Cluster Survey
MinTESAA	Materials in Transition, Environmental Sanitation Assessment and Audit
MIS	Management Information System
MLGDRD	Ministry of Local Government, Decentralisation and Rural Development
MMDAs	Metropolitan, Municipal, and District Assemblies
MoE	Ministry of Education
MoF	Ministry of Finance
MoH	Ministry of Health
MSWR	Ministry of Sanitation and Water Resources
MTDP	Medium-Term Development Plan
NADMO	National Disaster Management Organisation
NDPC	National Development Planning Commission
NESSAP	National Environmental Sanitation Strategy and Action Plan
NGO(s)	Non-Governmental Orgnisation (s)
NLLAP	National-Level Learning Alliance Platform
NMTDPF	National Medium-Term Development Policy Framework
NRW	Non-Revenue Water
NSA	National Sanitation Authority
NWP	National Water Policy
O&M	Operations and maintenance
ODF	Open defecation free
OHLGS	Office of the Head of the Local Government Service
OPEX	Operational expenditure
PPBME	Policy Planning Budget Monitoring and Evaluation
PPP	Public–private partnership
PURC	Public Utilities Regulatory Commission
RCC	Regional Coordinating Council
RSMS	Rural Sanitation Model and Strategy
SDG(s)	Sustainable Development Goal(s)
SESIP	Strategic Environmental Sanitation Investment Plan
SHEP	School Health Education Programme

SIGA	State Interests and Governance Authority
SIS	Sector Information System
SMC	School Management Committee
SMEs	Small and medium-sized enterprises
SPR	Sector Performance Report
SWG	Sector Working Group
SWM	Solid waste management
TWG	Technical Working Group
UNICEF	United Nations Children's Fund
VIP	Ventilated improved pit
WASH	Water, Sanitation, and Hygiene
WHO	World Health Organization
WinS	WASH in Schools
WRC	Water Resources Commission
WSSDP	Water Sector Strategic Development Plan
WSUP	Water and Sanitation for the Urban Poor
WWTP	Wastewater Treatment Plant

1. Introduction

This document provides an overview of the Ghana Water Supply, Sanitation and Hygiene Sector Development Programme (GWASHSDP) 2021-2030. The GWASHSDP supersedes the Water Sector Strategic Development Plan (WSSDP), covering the 2012–25 period, and the National Environmental Sanitation Strategy and Action Plan (NESSAP), developed in 2010; in so doing, it creates one unified water resources management and WASH development programme for Ghana. It takes into consideration current challenges faced in the WASH sector, integrates an understanding of Ghana's evolving national development agenda and plans, and is aligned with Ghana's regional and global WASH commitments and targets, as outlined in the African Water Vision 2025, Africa Agenda 2063, the Sanitation and Water for All Partnership, and the SDGs. The GWASHSDP has also been influenced by the 1992 Constitution of the Republic of Ghana and the Coordinated Programme of Social and Economic Development Policies (CPSEDP) of the Government of Ghana[1] .

1.1 Purpose of the GWASHSDP

The main purpose of the GWASHSDP is to provide a framework for coordinated implementation of activities to deliver the vision, policy objectives, and targets set for Ghana's WASH sector. The GWASHSDP is not in itself a detailed implementation manual, but it provides the strategic focus, and plans and guidelines, for achieving national WASH targets. It aims to guide the sector (government, the private sector, development partners, NGOs/civil society groups, households, and others) in the planning, development, and management of national water resources, and in the delivery and management of sustainable WASH services.

In addition, the GWASHSDP provides an information pack to guide all sector actors towards the realisation of national vision and targets in the WASH sector.

The specific objectives of the GWASHSDP are to:

- ensure that efforts to deliver WASH services are well-co-ordinated in order to achieve national, regional, and global goals and targets.
- address key sector challenges that limit the provision and sustenance of WASH services and the conservation of water resources, through strategic planning, institutional development, and system strengthening.
- encourage wider stakeholder participation in the planning, implementation, monitoring, and evaluation processes in water resources management, and WASH service delivery and management.
- prioritise neglected components that require more attention to ensure WASH services bring about positive and sustainable behaviour changes and outcomes in relation to water use, sanitation, and hygiene practices; and
- ensure accountability and transparency through monitoring and evaluation and reporting in the WASH sector.

1.2 Evolution of WASH sector policy and strategies

The Environmental Sanitation Policy (ESP) was first published in 1999 and was revised in 2010, and plans are underway to revise the policy again to meet current development objectives and address the aspirations of WASH sector actors. A consolidated National Water Policy (NWP) was first prepared in 2007 and it is

[1] The President of Ghana's vision and agenda for the socio-economic development of the country as outlined by Article 36 (5) of the 1992 Constitution of Ghana

currently being revised (2021).

The WSSDP (2012–25) provides a framework for implementing Ghana's vision (sustainable water and basic sanitation for all by 2025), policy objectives, and targets for the water and sanitation sector. The NESSAP (2010) provides strategies and action plans specifically for the environmental sanitation sub-sector, and to inform planning at the district level (for the development of District Environmental Sanitation Strategy and Action Plans (DESSAPs)) by the MMDAs for implementation. A timeline of the various sector policies, development plans, and international goals/vision is presented in Table 1 below, with emphasis on the role of the GWASHSDP as a unifying and coordinated development programme.

Table 1:Timeline of WASH policies and plans

<table>
<tr><th rowspan="3">Timeline</th><th colspan="4">WASH sector</th><th>International</th></tr>
<tr><th colspan="2">Policy</th><th colspan="2">Development plans</th><th>Goals/visions</th></tr>
<tr><th>Water</th><th>Sanitation</th><th>Water</th><th>Sanitation</th><th></th></tr>
<tr><td>2000 – 2010</td><td rowspan="3">NWP (2007)</td><td rowspan="3">ESP (2009)</td><td></td><td></td><td rowspan="2">Millennium Development Goals (MDGs) (2000–2015)</td></tr>
<tr><td>2010 – 2015</td><td rowspan="2">WSSDP (2012–25)</td><td rowspan="2">NESSAP (2010 – 2025)
Strategic Environmental Sanitation Investment Plan (SESIP) (2010–15)</td></tr>
<tr><td>2015 – 2020</td><td rowspan="2">SDGs (2016–2030)
Africa Water Vision (2025)
African Union Agenda (2063)</td></tr>
<tr><td>2020</td><td colspan="2">Revised NWP and ESP</td><td colspan="2">GWASHSDP (2021–2030)</td></tr>
</table>

1.3 Preparation of the GWASHSDP

The GWASHSDP was developed based on six key guiding principles and lessons learned during the implementation of the previous WASH sector guidance documents (WSSDP and NESSAP).

1.3.1 Guiding principles underpinning the development of the GWASHSDP

1. **Keep it simple (rationalise and simplify):** The development programme must be easy to read, understand, and implement. There may be a tendency to ensure that the development programme meets a long list of requirements, which could lead to cumbersome processes and procedures that in the end would be inoperative and inflexible.
2. **Make it realistic and achievable (feasible):** The vision, goals, and targets of the programme must be realistic and achievable within the timeframe. Programmes can easily become 'wish lists' when developed without considering the reality of funding constraints and capacity limitations (in government and the private sector, and among end users) regarding delivering sustainable and affordable services.
3. **Focus on results:** In this case the results relate to an increase in the size of the population using sustainable WASH services. The sector should set annual targets according to its ambitions but in line with the resources

available and should monitor and review results each year and make strategic adjustments to planning and implementation to improve future performance.

4. **Enter into inclusive partnerships**, recognising the different and complementary roles of actors and the strong desire to promote sector stakeholder ownership involved in service delivery, financing, and planning, to ensure equity in service delivery.
5. **Strengthen accountability and transparency:** Accountability and transparency are not only important to funding agents (central government, users, taxpayers, and donors) but they can also act as a way of recognising good performance and optimising available scarce resources (e.g., financial and human resources).
6. **Improve knowledge management at all levels:** Knowledge should be accessible by all stakeholders and should provide a basis for learning from experience to inform policy/strategic direction, as well as general sector performance.

1.3.2 Lessons learned from previous plans, strategies, and projects

1. **Improve planning and budgeting processes at all levels:** Previous plans were not clearly linked to the government budgeting process. For example, the SESIP that was developed to support the implementation of the NESSAP was not approved by Cabinet due to a lack of legal support from parliament to compel central government/the Ministry of Finance (MoF) to allocate financial resources for implementation. Also, it has been problematic to align DESSAPs with the decentralised Medium-Term Development Plans (MTDP) at the level of the MMDAs.
2. **Prioritise institutional strengthening at all levels**: The implementation of plans focuses on infrastructure, at the expense of institutional strengthening and human resources development. As a result, the sector has not benefitted fully from the required human resource capacity, and monitoring, evaluation, and sector learning, which are critical for sector development and sustainability.
3. **Scale up WASH monitoring at all levels**: WASH monitoring has not been fully operational due to the lack of a clear mechanism and funding to effectively scale up monitoring in all MMDAs. Operational monitoring systems are fragmented and are linked to previous projects. To address the lack of effective monitoring systems at scale will require commitment in terms of increasing the budgetary allocation to this area, and the provision of logistics (computer, software, vehicles, etc.), capacity building, and institutionalising the necessary accountability mechanisms.
4. **Support to Schools of Hygiene:** There has been a lack of support in terms of infrastructure, equipment, capacity, and review of the curricula, for the Schools of Hygiene. There is needs to provide greater support to the Schools of Hygiene (infrastructure, equipment, and capacity, and a review of the curricula, which must match the contemporary needs of the sector) under MSWR, in order to provide the needed capacity for the Environmental Health Officers/Environmental Health Assistants to meet the current needs of the WASH sector.
5. **Improve MMDAs' goal and target setting,** to align with national goals and targets. The goals and targets at the MMDAs level are not aligned with the national targets. Therefore, there was intensive engagement with the NDPC during the development of the GWASHSDP, to ensure harmonisation and alignment with the NMTDPF.

1.3.3 Approach to developing the programme document

The GWASHSDP was prepared under the leadership and guidance of MSWR. It was prepared based on relevant data obtained through extensive stakeholder engagement, in the form of consultative workshops and bilateral interviews, and desk review of sector literature. In addition, the Consultants engaged with the NDPC to ensure the strategic direction (vision, goals, and targets) of the programme is in sync with the Medium-Term Development Plan Framework (MTDPF), and other sector guidelines.

This mixed approach allowed for the triangulation of the information gathered.

In developing the GWASHSDP, several WASH sector documents at the national, regional, (Africa) and international levels (policies, strategies, programmes, projects, and plans) were reviewed to gain an understanding of the country context, challenges, priorities, trends, and gaps to be addressed. This informed the strategic focus and direction of the programme.

The success of the GWASHSDP will require the adoption of an integrated approach that considers the needs of all relevant stakeholders and segments of society, especially the people for whom the programme is primarily intended. Thus, an extensive sector-wide participatory and consultative engagement was undertaken during the preparation of the GWASHSDP, both at the national and sub-national levels.

Special attention was given to the leadership of MSWR (the sector Minister, Directors, and Heads of various units, and Managing Directors of sector agencies); and to the WASH Sector Technical Working Groups (TWGs) – made up of WASH stakeholders from ministries, departments, and agencies (MDAs), development partners, NGOs, and the private sector – set up by MSWR to oversee the entire process. The inception report was presented to the TWGs for their comments, and a progress report was also presented to the TWG before the final consultation workshop. In addition, four stakeholder consultation workshops were held, with two organised at the national level and two others held at the sub-national levels, in Kumasi (covering stakeholders from the Ashanti, Western, West-North, Ahafo, Bono, and Bono East regions), and Tamale (with stakeholders coming from the Northern, Savannah, Upper West, North-East, and Upper East regions. The last consultative workshop was organised for stakeholders from Oti, Volta, Eastern, Central and Greater Accra regions. Key informant interviews were also organised with key sector actors – such as the Water Resources Commission (WRC), the Ghana Water Company Limited (GWCL), MSWR, the Community Water and Sanitation Agency (CWSA), the Public Utilities Regulatory Commission (PURC), the NDPC, Regional and District Environmental Health and Sanitation Departments, etc. – to gather additional in-depth information. Several focus group discussions and key informant interviews were also organised with members of local bodies, offices, and individuals.

1.4 What is new in the GWASHSDP?

Unlike the previous (separate) WSSDP and NESSAP for the water supply and environmental sanitation sub-sectors, respectively, this document offers an integrated WASH programme, with clear provisions for hygiene (focusing on five behaviour practices), and WASH in institutions and public spaces. Further, it builds on the positive elements of the WSSDP and NESSAP and other relevant policies, strategies, plans, and projects, but also recognises the challenges that require priority actions. Box 1 below elaborates on the uniqueness of the GWASHSDP.

Box 1: What is new in the GWASHSDP?

The content of the GWASHSDP has been shaped and informed by several new developments and emerging issues in the WASH sector. These include the following:

- The integration of WASH and water resources dimensions is reflected in this integrated programme. The establishment of MSWR in 2017 has brought together water and sanitation and water resources under a single ministry.
- Ensuring alignment with national, regional (Africa), and international WASH targets. The SDGs have raised the bar in regard to expectations regarding access to and use of sustainable WASH services, and this is reflected in this document, which places greater emphasis on safely managed services, water security, water resources management, faecal sludge management (FSM) and a strategic move towards a circular economy.
- Integrating the latest understanding and reflections on sector challenges and gaps in governance, as identified during consultations on the development of the GWASHSDP.
- Acknowledging the shifting dynamics of sector financing. Ghana has now reached lower middle-income status, according to the World Bank[2], and with this status the government and WASH sector actors are now required to explore options to reduce dependence on donor aid for all WASH activities. This requires new thinking on how to mobilise and support the effective and efficient use of public funds, consumer tariffs, and private and consumer finance to deliver sector goals.
- Accounting for increasing urbanisation and the country's high population growth rate.
- Ensuring a specific focus on sector coordination, harmonisation, and alignment, which have been a challenge over the years.
- Addressing key interrelated issues of climate change, increasing competitive water uses (domestic, agriculture, energy, and industrial), decreasing water availability, increasing pollution of water resources, and environmental degradation.

1.5 How to use the GWASHSDP

The GWASHSDP will be used as a guide for the WASH sector in the following areas:

- the preparation of annual WASH plans, budgets, and performance reporting by sector actors, such as MSWR and its agencies (WRC, GWCL, CWSA, Schools of Hygiene), MMDAs, development partners, and NGOs.
- WASH sector budgeting and financing.
- enhancing sector coordination, harmonisation, and alignment; and
- the preparation of future WASH projects.

1.6 Organisation of the GWASHSDP

The GWASHSDP is organised into nine chapters, as follows:

- **Chapter 1** presents the introduction to the programme,

[2] https://data.worldbank.org/?locations=XN-GH

which highlights the purpose, evolution, and preparation of the GWASHSDP, what is new in the programme, how to use the programme document, and the organisation of the programme document.

- **Chapter 2** provides a review of the current WASH situation in Ghana, including the policy, legal, and regulatory framework and institutional arrangements, sector coordination and collaboration, and current WASH coverage, as well as a summary of key sector challenges.
- **Chapter 3** presents the programme outline, which encompasses the WASH sector vision, goals, and targets, the programme components, and underlying assumptions for achieving the programme targets.
- **Chapter 4** discusses the key programme components relating to water resources and water supply (urban water supply and rural/community water supply).
- **Chapter 5** discusses the key programme components relating to environmental sanitation (liquid waste management, solid waste management (SWM), and hygiene).
- **Chapter 6** presents WASH in institutions and cross-cutting issues (covering WASH in schools (WinS), WASH in healthcare facilities, WASH in emergencies, equity and inclusion, gender, and climate change).
- **Chapter 7** outlines institutional development and sector strengthening (institutional arrangements, capacity development, sector financing, sector planning, and sector learning and knowledge management).
- **Chapter 8** deals with the management and organisation of the programme (programme management arrangements, programme review and adjustments, financial management, communication strategy, and risks and mitigation measures).
- **Chapter 9** presents the cost of the programme, in terms of the cost of WASH in rural and urban areas, and the cost of the other components.

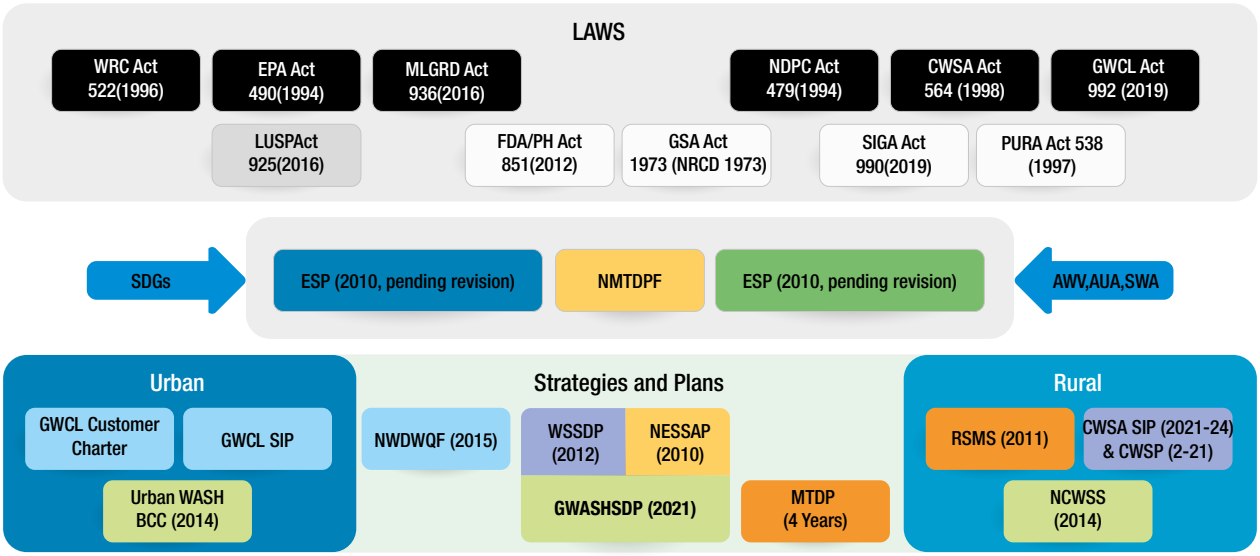
2. Current WASH situation

The desk review, and various consultative engagements at the national and sub-national levels (stakeholder workshops and key informant interviews), provided the information presented in this chapter. The chapter presents the current WASH situation, including the institutional mapping and arrangements, roles and responsibilities, the legal and regulatory framework, sector coordination, WASH coverage, and a summary of key sector challenges.

2.1 Policy, legal, and regulatory framework

An overview of the strategy, policy, and legal framework guiding the WASH sector is presented in Figure 1 below. This has been grouped into three sections: the first section presents the various acts of Parliament (laws) establishing specific institutions and mandates; the second section shows the two main sector policies (NWP, Community Water and Sanitation Policy (CWSP), ESP, and NMTDPF), which are influenced and/or informed by the SDGs, African Water Vision and other international commitments and the final section presents the main WASH sector strategies and plans for both rural and urban settings in the country.

Figure 1: Policy, legal, and regulatory framework



2.1.1 Policy framework

The main policies that govern the WASH sector are the NWP, the CWSP, the ESP, and the NMTDPF. The NWP is currently being revised, and plans are underway to revise the ESP. Similarly, the CWSP is pending final Cabinet approval. Table 2 below summarises the key national WASH sector policies. These sector documents provide the guide and basis for the current progress, and arrangements for strengthening sector institutions and systems for enhanced sector performance.

Table 2: Key WASH sector policies

POLICY	SUMMARY DESCRIPTION
NWP 2007	Provides a framework for the sustainable development of Ghana's water resources and water supply services. It is targeted at all water users, water managers and practitioners, investors, decision makers, and policymakers within the central governmental and decentralised (District Assembly (DA)) structures, and at NGOs and international agencies.
CWSP (2021 – pending approval)	The goal of the policy is to 'improve access to safe water, sanitation and hygiene as a means to improving living standards of people' in rural and small towns.
ESP 2009	The ESP takes a wide view of sanitation, covering food hygiene and solid waste and excreta disposal. Its decentralised approach reflects Ghana's commitment to developing decentralised forms of government and services delivery. It sets out basic principles and objectives, identifies roles and responsibilities, and also covers environmental management and protection, legislation, and funding.
NMTDPF	The NMTDPF guides the preparation of MMDAs' development plans to ensure the achievement of both regional and national development goals and objectives.

2.1.2 Legal framework

An institutional review of the sector conducted in 2021[3] found that the current laws are generally sufficient to create the institutional and regulatory powers in the sector. The division of responsibility between the WRC (regulating water abstraction) and the Environmental Protection Agency (EPA) (regulating effluent discharge) is collaborative, to reduce the risk of non-complementary functions. There are ongoing engagements to prepare appropriate legislative instruments to enhance reforms in the community water and sanitation sub-sector, to expand CWSA's mandate to include the management of small towns' water supply systems and also to establish the proposed National Sanitation Authority (NSA).Table 3 below summarises the laws establishing WASH institutions, and their mandates.

[3] Institutional study by Castalia

Table 3: Laws establishing WASH organisati

ENTITY	LAW	MANDATE
WRC	Water Resources Commission Act, 1996 (Act 522)	Regulation and management of the utilisation of water resources
EPA	Environmental Protection Agency Act, 1994 (Act 490)	Protection of the environment
PURC	PURC Public Utilities Regulatory Commission Act, 1997(Act 538)	Regulating utility services provided by public utilities
Ghana Standards Authority (GSA)	Standards Authority Act, 1973	Sets standards for drinking water quality, testing procedures, and equipment
Food and Drugs Authority (FDA)	Public Health Act, 2012 (Act 851)	Regulates packaged and bottled water production through producer inspection and regulation
DAs	Local Governance Act of 2016 (Act 936)	Overall development of districts
State Interests and Governance Authority (SIGA)	State Interests and Governance Authority Act, 2019 (Act 990)	Monitoring and evaluating the performance of government entities (such as GWCL and CWSA) through performance contracts
NDPC	National Development Planning Commission Act, 1994 (Act 479)	Prepares and coordinates national development policies, programmes and projects, as well as monitor and, evaluate processes, outputs, outcomes and impact
CWSA	Community Water and Sanitation Agency Act of 1998 (Act 564)	Facilitates the provision of safe water and related sanitation services to rural communities and small towns
GWCL	GWCL Act 461 of 1993 as amended by Legal Instrument (LI) 1648 (1999)	Responsible for the planning and development of water supply systems in urban communities in the country, and for the design, construction, rehabilitation, and expansion of new and existing water works

*Source: Study of the Institutional, Policy, Financial and Legal Aspects of the Water and Sanitation Sector in Ghana (2021)

The LIs for regulation, standards, and norms in the WASH sector consist of a set of acts, ordinances, and rules specifying the roles and responsibilities of the various sector institutions listed in Table 3 above. However, there are some challenges in the use and implementation of these laws. The identified challenges and proposed solutions are addressed in chapters 4–8. Most of the challenges are related to capacity gaps in institutions, lack of awareness, weak political commitment, and inadequate investment.

2.1.3 Regulatory framework

The regulations, legal documents, actors responsible, and some key barriers to enforcement are summarised in Table 4 below. The main areas of regulation for which specific barriers are identified include water resource management (e.g., water use, licensing, dam safety, transboundary issues, etc.), water supply tariffs settings, household toilet construction standards, FSM, and the involvement of the private sector in the WASH sector through public–private partnerships (PPPs).

Table 4:WASH sector regulations

Regulations	Legal documents	Actors responsible	Some barriers to enforcement
Water resource management:			
Internal			
Water use	LI 1692 (Water Use Regulation 2001)	WRC MMDAs	• MMDAs role in the implementation unclear • Weak MMDAs capacity for enforcement • Lack of public awareness
Drilling licences	LI 1827 (Drilling Licence and Groundwater Development Regulation 2006)	WRC MMDAs	• MMDAs role in the implementation unclear • Weak MMDAs capacity for enforcement
Dam safety	LI 2236 (Dam Safety Regulation 2016)	WRC National Disaster Management Organisation (NADMO)	• Not yet known as new regulation
Buffer zone	Buffer Zone Policy	WRC MMDAs	• Weak legislation to give legal backing • Weak MMDAs capacity for enforcement • Lack of public awareness
Transboundary			

Regulations	Legal documents	Actors responsible	Some barriers to enforcement
International laws	Convention on the Protection and Use of Transboundary Water Courses and International Lakes (1992 Water Convention) Convention of the Law of the Non-navigational Use of International Water Courses (1997 Water Courses Convention)	MSWR WRC	• Other Riparian Countries are yet to ratify international laws as Ghana has achieved. • International basins without management bodies especially for Bia, Tano and Todzi-Aka basins.
Water supply:			
Tariff-setting			
Rural	Act 936 (Local Governance Act 2016) CWSA Regulations 2011 (LI 2007)	CWSA/private sector MMDA	• Political interference • Unclear boundaries between rural (peri-urban/small towns) and urban areas
Urban	Act 538 (PURC Act 1997)	GWCL PURC	• Political interference
Water supply services:			
Construction standard	GS 1207:2018 Ghana Building code	MMDAs	• Code not widely known or utilised • Low publicity and awareness of the code • Weak political will or capacity at MMDAs • Cost of the building code is prohibitive
Reliability (24/7)	GWCL customer charter, PURC	GWCL and MMDAs	• Difficult to regulate given that this standard is still developing, and coverage is not universal • Over-regulation may lead to resources being moved from those without to those with a water supply

Regulations	Legal documents	Actors responsible	Some barriers to enforcement
Water quality	GS 175, NDWQMF	PURC (urban) MMDAs/CWSA (rural and small towns)	• Roll-out of the Water Safety Plans has been delayed due to capacity and funding issues • Weak capacity of MMDAs to regulate water quality (including self-supply)
WASH services to reach the poor	PURC Consumer service regulation LI 2413	GWCL, PURC, Consumer Protection Agency	• Limited accountability • Inadequate funding for universal obligation • Serving the poor is not financially attractive to the urban utility
National policy on PPP	PPP Act 1039 (2020)	MMDAs CWSA GWCL	• Inadequate capacity of MMDAs to initiate PPPs • Unclear financial viability for the private sector to serve the poor
Sanitation:			
Household toilets			
Construction standards	GS 1207:2018 Ghana Building code	MMDAs	• Awareness of construction standards is limited • Weak local-level capacity to regulate standards • Unclear land rights for informal settlements, leading to reluctance to build permanent structures to high standards
Legal enforcement	Criminal Code, 1960 (Act 29) – sections (285, 286 & 296) Act 936 Act 851 (Public Health Act) Building Regulations LI 1630 on toilets MMDAs bye-laws	MMDAs	• Limited awareness of sanitation bylaws • Weak local-level capacity to enforce sanitation • Political interference and lack of political commitment • Fear of potential backlash from residents • Unclear land rights for informal settlements, leading to reluctance to build household toilets
Faecal sludge management (FSM)			

Regulations	Legal documents	Actors responsible	Some barriers to enforcement
Licensing private emptiers	Act 936 MMDAs bye-laws	MMDAs	• Inadequate regulatory framework for FSM • Weak capacity of MMDAs to license/regulate • Limited private sector capacity to safely empty pit latrines
Control of unsafe disposal	Environmental Assessment Regulation, LI 1652	EPA/MMDAs	• Weak capacity of MMDAs to regulate • Weak political commitment • Limited infrastructure (safe disposal sites)
Effluent standards and control	GS 1212:2019. Environmental Assessment Regulation, LI 1652	MMDA/EPA	• Weak capacity of MMDAs to regulate • Weak political commitment • Inadequate wastewater treatment plant (WWTP) and faecal sludge treatment plant (FSTP) infrastructure
National Policy on PPP	PPP Policy 2011	MMDAs	• Inadequate capacity of MMDAs to initiate PPPs • Unclear financial viability for the private sector to serve the poor

2.2 Institutional arrangements

This section looks at the roles and responsibilities of key institutions that are considered WASH sector actors, including central and local government agencies, the private sector, development partners, NGOs, academia, and communities.

2.2.1 Roles and responsibilities of relevant actors

Table 5 below presents the key institutions, mandates, and functions relevant to the WASH sector. Further details are given in Annex A.

Table 5: Summary of Institutional mandates

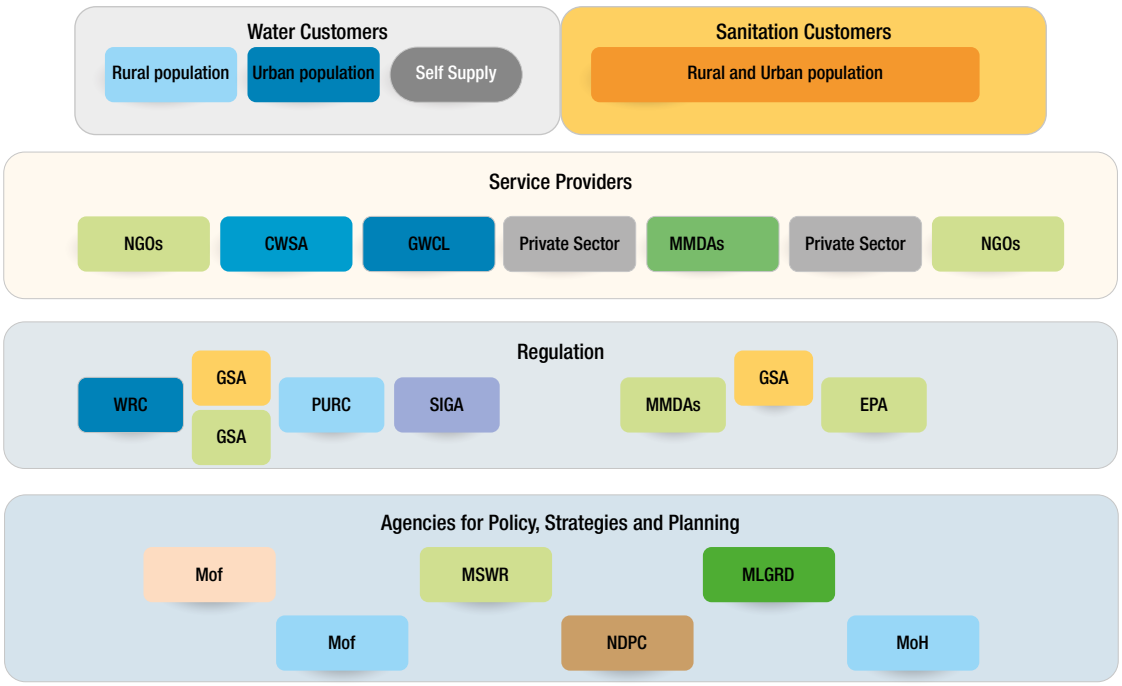
Institution	Mandate/function related to WASH services
MoF	Lead ministry that mobilises financial resources (both local and foreign) for national development for all sectors, including WASH
MSWR	Policy formulation and sector coordination and harmonisation
Ministry of Education (MoE)	Formulation of school WASH policy, plans, programmes, guidelines, and standards to accelerate sustainable WASH services in all schools (particularly pre-tertiary) in Ghana

Institution	Mandate/function related to WASH services
Ministry of Health (MoH)	Prevention and management of communicable diseases
Ministry of Gender, Children and Social Protection	Leads the country on ensuring gender mainstreaming is embedded in national development efforts, including WASH services delivery
Ministry of Local Government Decentralisation and Rural Development (MLGDRD)	Sets the policy framework and coordinates the development programmes of MMDAs to ensure sustainable development at the local level
NDPC	Ensures effective coordination of the preparation, implementation, monitoring, and evaluation of national policies and plans
Local Government Service Secretariat	Recruitment, placement, promotion, transfer, and dismissal of all staff of MMDAs (including officials at the centre of WASH planning, implementation, management, monitoring, evaluation, and reporting at the MMDA levels)
WRC	Regulation and management of the utilisation of water resources
CWSA	Facilitates the provision of safe water and related sanitation services to rural communities and small towns
GWCL	A limited liability company established under the Companies Act with the responsibility for potable water supply to all urban areas.
Schools of Hygiene	Training of Environmental Health and Sanitation Officers
Regional Coordinating Councils (RCCs)	Ensure effective coordination, harmonisation, and monitoring of all development activities (including WASH development) in the regions
MMDAs	Focal point for local-level development through inclusive and participatory planning, implementation, and monitoring and evaluation of various actions and activities to transform local areas, including WASH development –particularly community WASH (which is decentralised)
Private sector (consultants, contractors, small and medium-sized enterprises (SMEs), individual masons)	Mainly contractors, suppliers, water service providers, and consultants providing various goods and services to accelerate the development of WASH facilities and services
Development partners	Both multi-lateral (e.g. World Bank and United Nations agencies such as the UNICEF, United Nations Environment Programme (UNEP), United Nations Development Programme (UNDP), World Health Organization (WHO) and the European Union (EU) and African Development Bank) and bi-lateral partners such as Department of International Development (DFID), Global Affairs Canada (GAC), United States of America International Development Agency (USAID), Agence Français pour le Development (AfD), GIZ/KFW) that provide both technical and financial support to the sector

Institution	Mandate/function related to WASH services
NGOs and faith-based organisations	Partner in WASH services development and management at various levels by participating in policy/strategy dialogues and direct services provision, monitoring, evaluation, and reporting. They also play key roles in capacity building efforts at various levels (especially at the community level). These include International Non-Government Organisations such as WaterAid, Plan Ghana, World Vision International and IRC and local based Community based organisations and faith-based organisations e.g., ADRA, Catholic Relief Services.
Universities (technical colleges/universities and research institutes,)	Provide the needed skilled workforce for the sector, as well as supporting the sector by conducting thematic research

Figure 2 below is a simple schematic presentation of the key roles and responsibilities of WASH sector stakeholders, including MDAs, institutions, and customers. (Note that this schematic presentation is not an organogram and does not show any hierarchy among institutions.)

Figure 2: Stakeholders and institutions in the WASH sector



Note: Different colours are used for the purposes of providing contrast, for ease of identification.

2.3 Sector coordination and collaboration

The framework for sector coordination has been in place for many years but its operation has not been smooth and continuous (see Table 6 below). The WASH sector TWG is responsible for overseeing sector coordination and comprises government, development partners, and civil society organisation representatives. There are four thematic groups: sanitation, monitoring and evaluation, water quality, and WASH in emergencies. The thematic groups report to the Sector Working Group (SWG).

Currently, there are multiple of sector coordination platforms, such as the quarterly Inter-Ministerial Committee on WASH[4] meeting, and the sector TWG[5] and its sub-groups on thematic issues. Also, sector agencies under MSWR hold monthly meetings with the leadership of the Ministry, headed by the Minister and Chief Director. Various learning and knowledge platforms also exist, including the Joint Sector Review (JSR), which is a government-led process that brings sector stakeholders together – among other things, to have an overview of the finance, implementation, governance, and performance of the WASH sector. During such reviews, performance assessment, setting of priority actions, and the provision of strategic guidance to the WASH sector are considered. However, JSRs have not been consistently undertaken in recent years.

The Sector Information System (SIS) provides the framework for collecting and compiling information against the WASH sector performance indicators but is not functional as it is yet to be linked to the management information systems (MISs) of the sub-sector - the District Monitoring and Evaluation System (DiMES), Basic Sanitation Information System (BaSIS), and Enterprise Resource Management. Further details are provided in Chapter 7.

Table 6: Sector coordination platforms

Sector coordination components	Current status	Key operational barriers
Sector working groups	Partially functional	• Weak government commitment/leadership • Sector split between two ministries – policy is from MSWR while implementation at MMDAs is through MLGDRD • Recently revitalised but need to be institutionalised in WASH calendar
Annual Joint Sector Reviews (JSRs)	Infrequent	• Weak government commitment/leadership • Limited capacity and resources • Limited consultation in the sector planning process • Recently revitalised but need to be institutionalised in WASH calendar
Annual Sector Performance Reports (SPRs)	Infrequent	• Weak government commitment/leadership • Limited capacity and resources • Recently revitalised but need to be institutionalised in WASH calendar
Sector Information System (SIS)	Not yet functional	• Limited capacity and resources • SIS for sanitation and rural water supply is not operational countrywide

[4] The Inter-Ministerial Committee on WASH includes the Minister of Local Government, Decentralisation and Rural Development, the Minister of Roads and Highways, the Minister of Environment Science and Technology, the Minister of Health, the Minister of Education, and the Minister of Works and Housing.
[5] The sector TWG is made up of representatives from government, development partners, the private sector, and NGOs/civil society groups.

Under the GWASHSDP, MSWR will strengthen and expand inter- and intra-governmental coordination among both existing sector collaborators (such as the education, health, environment, finance, local government and gender sectors) as well as NADMO and national security actors, who are newcomers in the provision of WASH services and are not yet engaged in terms of following national standards and guidelines. Additionally, MSWR and its agencies, through routine engagement and monitoring, will strengthen the coordination of the activities of the private sector, self-suppliers, and NGOs (including faith-based organisations) to ensure national standards and guidelines are followed in their operations. To this end, guidelines and standards will be readily made available to support harmonising and aligning the efforts of all actors.

2.4 Current WASH coverage

Although some successful steps towards increasing coverage of WASH services have been made, various targets in past plans have not been achieved, due to inadequate investment (among other factors). The current WASH situation is summarised in Table 7, using both survey-based and provider-based/administrative data. The survey-based data are from the WHO/UNICEF Joint Monitoring Platform (JMP), while the administrative data are from GWCL, CWSA, and WRC. The administrative/provider-based data are used for national planning but do not align with the SDG 6 indicators.

Table 7: Coverage of WASH service levels

Scenario	Survey-based data 2020 (JMP)			Administrative/Provider-based data (CWSA, GWCL, WRC)		
	Rural	Urban	National	Rural (CWS)	Urban	National
Water resources						
Ambient water quality	-	-	-	-	-	57.8*
Water service levels						
Basic[1]	56%	36%	44%	NA	NA	NA
Safely managed[2]	16%	60%	41%	NA	NA	NA
Coverage	-	-	-	62.47%**	78.2%***	71%
Sanitation service levels						
Safely managed	15%	12%	13%			
Basic[3]	2%	16%	10%	NA	NA	NA
Limited[4]	35%	56%	47%	NA	NA	NA
Hygiene service levels						
Basic[5]	35%	47%	42%	NA	NA	NA

[1] Drinking water from an improved source, provided the collection time is not more than 30 minutes for a round trip, including queuing.
[2] Drinking water from an improved water source that is located on premises, available when needed, and free from contamination.
[3] Use of an improved facility that is not shared with other households.
[4] Use of an improved facility that is shared with two or more households.
[5] Availability of a handwashing facility on the premises with soap and water.
*WRC data for 2019. **This is CWSA coverage for 2020.
***This is GWCL coverage for 2020, based on an adjusted definition that recognises 75% of the full water demand.
NA – not available.

2.4.1 Water Resources Management

The WRC, established through an Act of Parliament (Act 522 of 1996), is responsible for managing water resources in Ghana. Ghana's water resource potential is divided into surface and groundwater resources. Surface water resources are mainly from three river systems that drain Ghana: the Volta (which is made up of the Red, Black, White and Lower Volta Rivers and the Oti River), South-Western (made up of the Bia, Tano, Ankobra and Pra rivers), and Coastal (Tordzie/Aka, Densu, Ayensu, Ochi-Nakwa and Ochi-Amissah) basin systems. These river systems cover 70%, 22%, and 8%, respectively, of Ghana's total land area.
The total annual runoff is 53.2 billion cubic metres (m3), with the Volta River accounting for the largest volume – 41.6 billion m3. The mean annual runoff from Ghana alone is about 39.4 billion m3. The Volta, South-Western, and Coastal systems contribute 65%, 29%, and 6%, respectively, of this runoff.

Ghana's groundwater resources occur in three main geological formations: the basement complex (comprising crystalline igneous and metamorphic rocks); the consolidated sedimentary formations underlying the Volta basin (including the limestone horizon); and the Mesozoic and Cenozoic sedimentary rocks. These formations cover 54%, 45%, and 1%, of the country respectively. The depth of aquifers in the basement complex and the Volta basin is normally between 10 metres and 60 metres, with yields rarely exceeding 6 m3/h. There are few studies on groundwater recharge.

The WRC has instituted seven river basin boards, six of which are active, with one being inactive. The active basin boards are Densu, White Volta, Pra, Ankobra, Tano, and Black Volta. The inactive basin board is the Dayi, which is in the formative stage (as at August 2021). Each of the active river basin boards have developed integrated water resource management (IWRM) plans, which have been implemented. Currently, a number of them have been reviewed, while some are undergoing review. In terms of water quality management, the WRC has 78 water monitoring stations which are operational. It has also undertaken 35 hotspot and ecological monitoring activities.

Ghana shares the majority of its water resources with five neighbouring countries: Burkina Faso, Cote d'Ivoire, Togo, Benin, and Mali. Ghana has ratified two United Nations international legal frameworks on water: the 1992 UNECE Convention on the Protection and Use of Transboundary Watercourses and International Lakes; and the 1997 Law of the Non-Navigational Uses of International Watercourses (1997 Watercourses Convention), which provides a legal framework for regional cooperation on shared water resources (rivers, lakes, and groundwaters).

The WRC has legislative water management instruments that are used in the management of Ghana's water resources, such as the Water Use Regulation (LI 1692), the Drilling Licence Regulation (LI, 1827), and the Dam Safety Regulation (LI, 2236). The WRC has also developed the Buffer Zone Policy, which is yet to be legislated. In addition, the WRC developed the National IWRM Plan in 2012. A significant number of the actions set out in the plan have been achieved, while some key issues remain unaddressed, alongside new challenges and demands.

The major challenges to Ghana's water resources are the enforcement of regulations, data availability, water use efficiency, ecosystem degradation, pressure on quality and quantity, deficiency in water storage infrastructure, and having a robust data and information management system, as well as decision support systems for water allocation. Ghana's water security is currently under threat from illegal mining activities across many river basins, including the Pra, Ankobra, Tano, and White Volta. These river bodies are being affected in terms of both quality and quantity. Numerous attempts to curtail this threat have been made but they have not been sustained. A lasting solution is yet to be achieved.

2.4.2 Water supply services

As was indicated in Table 7 above, the 2020 water coverage for

urban and community water services was 78% and 62% from GWCL and CWSA, respectively. A major challenge is funding to provide new water supply infrastructure for those not currently served and to sustain existing service through adequate provision for capital maintenance (repair, rehabilitation, and replacement), routine operations, and minor maintenance.

For urban water supply, inadequate funding for capital maintenance has resulted in weak and aged distribution networks in some parts of the network, contributing to frequent bursting of pipes and high non-revenue water (NRW) (50%), and threatening the maintenance of water quality. There are also customer vices, such as illegal connections and the bypassing of water metres. In addition, poor catchment management and increasing human activities (including mining and agricultural activities) within some water catchments (the Birim, Oda, Pra basins) are causing rapid water quality deterioration. These result in reduced availability of water resources for water supply needs, and increased cost of water treatment and associated operational challenges.

Government funding for rural water supply is usually through CWSA (for projects) and the MTDP of the MMDAs. In addition, there are other government agencies – such as national security actors, special initiatives under the Office of the President, and the Zongo Development Authority – that provide WASH interventions. The private sector, NGOs, community-based organisations, and faith-based organisations, also make significant contributions in financing WASH but need regulation to ensure the safety of water supply and establishment of appropriate management structures at the community level. Institutional arrangements for rural water supply are complex, with MMDAs, CWSA, NGOs, and the private sector all involved, with no clear-cut coordination mechanism for planning, implementation, monitoring, and reporting.

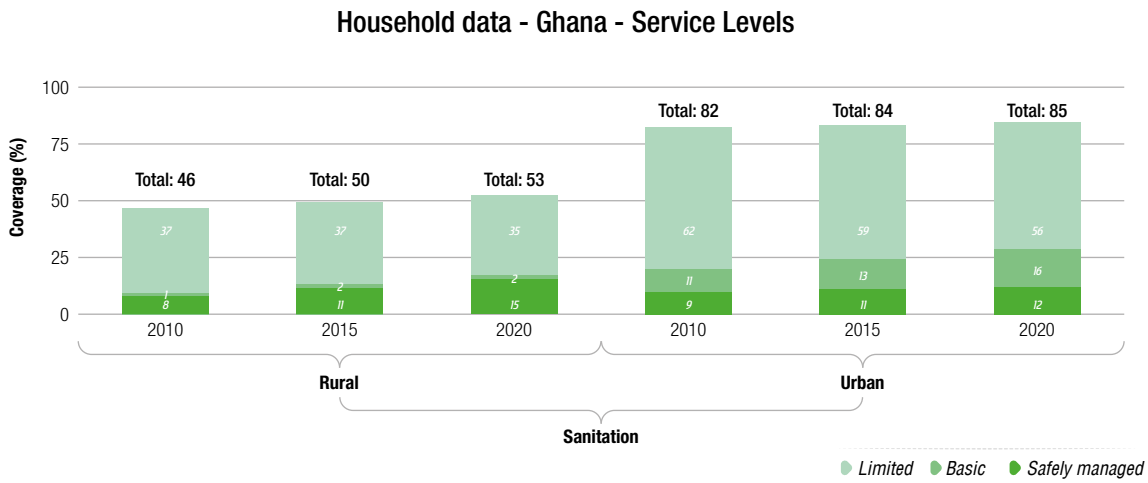
Spatial inequity for rural water supply is much more pronounced than for urban water supply, particularly in locations that are hard to reach and those with challenging environments, such as those that are subject to frequent flooding and those with difficult hydrogeological terrain (i.e., leading to yield and quality issues). Inequity according to wealth status is much more pronounced for urban water supply. Sections 2.4.4 and 6.4 provides more details on inequity.

On water supply in schools, the Education Management Information System (EMIS) indicates that for the 2018/19 school year, out of the 77,925 basic schools across the country, 25,111 (32%) had access to water. The water supply coverage was higher in the public schools (39%) than in private schools (25%).

2.4.3 Sanitation

Sanitation coverage poses a vast contrast to that for water supply, with only 17% and 28% access to acceptable (basic or safely managed sanitation service) for rural and urban areas, respectively (see Figure 3). The low coverage figures do not provide the complete picture, however, as many households rely on shared toilet facilities (considered as limited service), including public toilets, which are usually of the pay-per-visit type. This 'limited' access amounts to 35% for rural areas and 56% for urban areas.

Figure 3: Rural and urban sanitation service levels



In rural areas, household toilets are generally self-built, so there is little quality control in regard to their construction or standardisation of their design. The most common rural option is the traditional pit latrine, which uses locally available materials. The community-led total sanitation (CLTS) approach has proved successful in leveraging household investment in toilets, but CLTS toilets vary considerably in both design and construction quality. Appropriate technical support to households on toilet construction and building the capacity of local builders or artisans to provide appropriate technology options, would help improve the durability of rural toilets. In recent times, through the support of UNICEF and other partners, the rural sanitation sub-sector has seen much investment in infrastructure provision and the development of implementation guidelines and strategies.

The demand-led approach is also being implemented by a Government of Ghana- UNICEF programme in urban areas of Tamale, Ho, and Ashiaman, where more than 30,000 durable household toilets have been built since 2017. The model uses sanitation marketing (SanMark) as the guiding approach, with a focus on training artisans and establishing small businesses for toilet construction.

Access to household toilet facilities has increased in low-income urban communities, through the World Bank-funded Greater Accra Metropolitan Area (GAMA) Water and Sanitation Project. The project constructed a total of over 27,000 household toilets, serving over 284,876 people. In addition, 406 institutional toilets were provided in schools, serving 232,000 pupils.

Inequities in sanitation are pronounced across both geographic locations and wealth quintiles. Coverage of basic sanitation is generally quite low, with only a small difference between rural and urban areas – almost exclusively limited to the top wealth quintile. Toilets in areas with challenging soil conditions, such as sandy, waterlogged, and rocky soils, are more likely to collapse and/or more expensive to build. Section 2.4.4 provides more details on inequity.

The EMIS indicates that currently only 28% of basic schools in Ghana have access to toilet facilities, with coverage slightly higher in public schools (33%) than in private schools (22%) in year 2018/19. These figures do not indicate the condition and adequacy of the facilities in schools. The Ghana Education Service (GES), under whose responsibility WinS falls, has had some challenges in coordinating and harmonising WinS interventions, mainly due to the application of a project-based approach, which often has little recourse to the GES for direction.

2.4.4 Equity and inclusion in WASH

There is a clear wealth disparity in regard to basic water and sanitation access, with the rich nearly twice as likely to have access as the poor. More than half of the poorest quintile household population practise open defecation, and this practice significantly decreases with increases in wealth. (See Figures 4, 5, and 6).

Figure 4: Spatial equity – sanitation

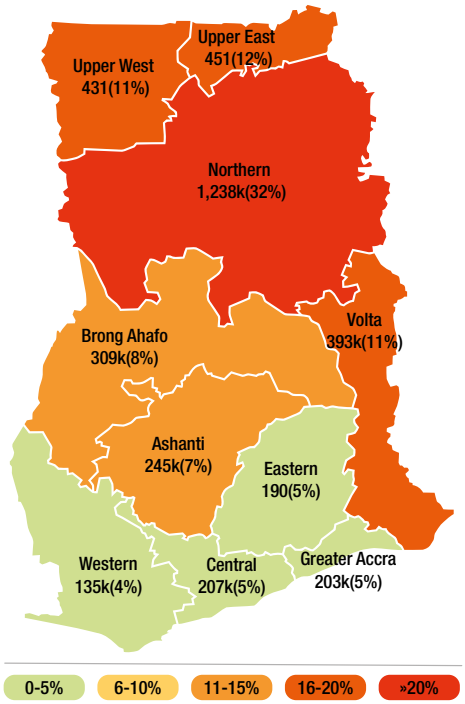


Figure 5: Spatial equity – water supply

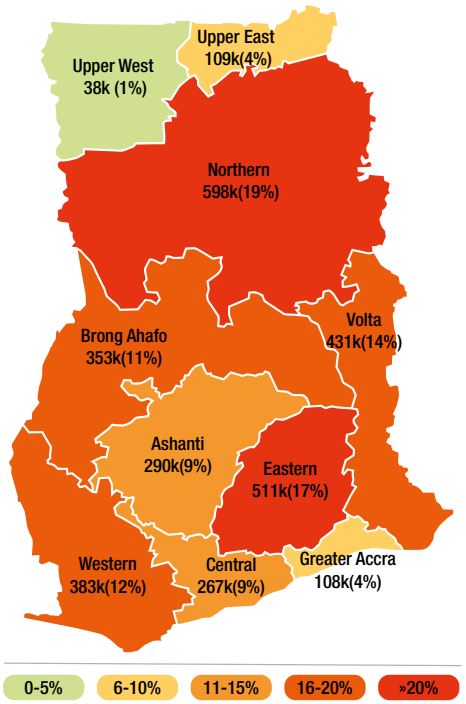
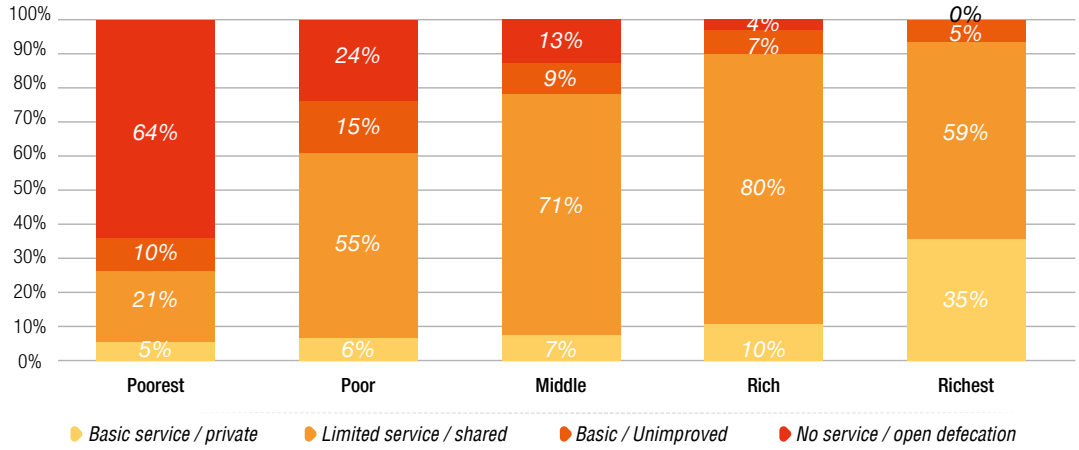


Figure 6: Sanitation access by wealth quintiles



There are both economic and geographical inequities in the WASH sector (see Figure 5 and Figure 4). Figure 6 presents the socioeconomic inequities in the sanitation sub-sector.

The approaches to address equity concerns are the right to WASH and mechanism to ensure WASH services are affordable such as subsidising access to water services rather than consumption, providing separate metres in big 'compound houses' to ensure block tariffs are not punitive. In addition, the needs of the aged and physically challenged persons are essential in addressing equity concerns.

2.4.5 Sources of funding for WASH

There are numerous funding sources for the WASH sector (see Table 8) yet the amount available is insufficient to reach government WASH targets, and this issue has become a perennial challenge in the sector. The funding sources include Government of Ghana allocations, internally generated funds (IGF), loans and grants from development partners, and other sources, like private sector funding, individual households (contributions and tariffs), community funding and corporate bodies (corporate social responsibility). The dominant sources remain the Government of Ghana and donor funding. Meanwhile, the government policy, Ghana Beyond Aid, calls for the need to identify innovative funding sources since donor funding and development aid are expected to fade away.[6]

The WASH SPR for 2018/19 indicates that only 20% of capital expenditure (CAPEX) budgeted for the sector was made available in 2018, and the situation worsened in 2019, with only 9% of funds released.[7] Anecdotal evidence suggests that significant investment is made in the WASH sector through other government agencies (e.g. Zongo Development Authority, Northern, Middle and Coastal Development Authorities), the private sector, and NGOs but this is not well captured in WASH reports. Notwithstanding this, the WASH sector is far behind in terms of achieving its annual coverage targets. The proportion of the population with access to basic drinking water sources at the national level was 62% in 2019, which was a decline from the 2018 figure of 68% and a deviation from the 2019 target of 70%.[8] Increasing capital expenditure will help to accelerate access to WASH services. Generally, investments in the WASH sector are not adequate to enable the achievement of sector targets. For example, the maximum number of new household toilets built per year is 30,000,[9] serving 150,000 people, while the annual population growth is 600,000. Table 8 below presents the sources of funding and areas of allocation for WASH service delivery.

Table 8:Sources of funding for WASH service delivery

Source	Institutional recipient	CAPEX/OPEX/CapManEx*	Limitations
Government grants (DACF, District Development Fund)	MMDAs	CAPEX / CapManEx / OPEX	Inadequate to address WASH sector needs and mostly goes to operation costs for field workers

[6] WASH Sector Performance Report 2018/19.
[7] This refers to investment that was channelled through MSWR.
[8] NDPC 2019 Annual Progress Report on the Implementation of the Medium-Term National Development Agenda, An Agenda for Jobs: Creating Prosperity and Equal Opportunity for all (2018–2021).

Source	Institutional recipient	CAPEX/OPEX/CapManEx*	Limitations
Government loans	GWCL	CAPEX / CapManEx	Mainly infrastructure, rather than system strengthening/institutional development
Tariffs paid by users	GWCL, CWSA, private operators	CAPEX / CapManEx / OPEX	Does not cover all the costs of water supply in most cases due to inefficiencies, reflecting high NRW and low bill collection
MMDA IGF	MMDAs	CAPEX	Large disparity between MMDAs in the amount of IGFs but in general quite small. In addition, MMDAs have multiple priorities
Private sector	Private sector	CAPEX / OPEX	Limited to financially viable locations. Full cost recovery for water schemes is challenging without some sort of government subsidy. Sanitation investment mainly limited to public toilets, although some PPP arrangements for WWTP
Development partners	MMDAs, GWCL, CWSA, NGOs	CAPEX	Limited to selected locations
NGOs/United Nations	NGOs, MMDAs	CAPEX / OPEX	Limited to selected locations

CAPEX = Capital expenditure; CapManEx = capital maintenance expenditure; OPEX = operating expenditure; DACF = District Assembly Common Fund.

2.5 Summary of key sector constraints

The section presents a brief overview of the key WASH sector challenges in the areas of coordination, sustainability, and financing that are common across the different sub-sectors – water resources management, urban water supply, rural water supply, environmental sanitation, and WASH in institutions.

2.5.1 Sector coordination

- **Weak sector coordination:** A framework for sector coordination has existed for several years but has not been consistently followed. The creation of the MSWR in 2017 was intended to improve WASH sector coordination through the consolidation of responsibilities for water, sanitation, and water resource management within a single Ministry. This has been largely successful but there are still coordination challenges with local government agencies as well as other government agencies that are not under the Ministry of Sanitation and Water Resources. Previous development plans (NESSAP/WSSDP) were not widely adopted or linked

[9] Based on different data sources: TWG compilation and collated data, and 2020 sector review organised by MSWR (review of 2017–20 performance).

to sector-level planning and budgeting. In some cases, government WASH activities are conducted outside MSWR, such as at the Ministry of Defence, the Zongo Development Authority, and special initiatives under the Office of the President, but these activities are not well-coordinated, monitored, and reported on. Furthermore, WASH activities conducted outside the government through the private sector and NGOs are also not well-coordinated and are often not captured in sector reports.

- **Inequitable resource allocation**: In the WASH sector, more investment is made in water supply than sanitation. Equally, there is more investment in urban than rural water supply. This is largely due to GWCL's ability to attract loans as a company on its own balance sheet, while CWSA cannot do same because it is an agency that relies on government subvention.
- **Weak MISs for WASH:** There is a lack of a nationwide functional MIS. The recently established MIS for the sector (SIS) at MSWR is not yet fully functional and has not been linked to the sector agencies' monitoring MIS. Many MMDAs do not have functional MISs for WASH (DiMES and BaSIS have not been rolled out at many MMDA levels). Hence, many MMDAs are unable to generate timely information for planning, decision-making, and reporting.
- **Lack of integrated planning between IWRM and WASH services:** Catchment degradation and climate change has led to a deterioration in water quality and in the quantity of both surface and groundwater. In turn, this has led to increased capital investment for water source development, higher treatment costs for urban water supply schemes, and the drying up of boreholes in rural water supplies, which calls for integrated planning for IWRM and WASH.
- **The WASH planning process at the local level is not linked to the reality:** Efforts to improve sanitation planning at the MMDA level have, to a large extent, not yielded the desired results as medium-term plans have produced 'wish lists' that have little chance of being incorporated in district annual plans.

2.5.2 Sustainability

- **Poorly constructed and managed WASH services that are not sustainable:** Poorly constructed and managed WASH facilities often lead to disrupted and poor services, where infrastructure is not well maintained, and users are put off from using the service (even though there may be little alternative). About 30% of rural water systems are non-functional. [10]
- **Low priority given to system strengthening and human resource development:** Short-term WASH outputs through infrastructure projects tend to be prioritised over the delivery of sustainable WASH services. Less attention is given to system strengthening, human resource development, and institutional development to effectively plan, deliver, and manage these WASH services.
- **WASH services are not reaching the poor:** Often, WASH services only reach the few, because they are not affordable[11] for many of the intended users. This is partly due to the 'nature of the game' as services from the public utilities reach the better off, who are more able to pay for and demand WASH services faster, and partly due to the weak capacity and limited accountability of planners and service providers in regard to delivering appropriate WASH services to the poor. Moreover, service providers and planners are often reluctant to provide WASH infrastructure and services in informal settlements, due to unclear land tenure or settlements rights. The poor and vulnerable often have little influence over their landlords and there is little external regulation to ensure landlords provide appropriate WASH services.
- **Providing and sustaining WASH in institutions:** Funding for WASH infrastructure in schools and other institutions

[10] Adank, M., Kumasi, T., Abbey, E., Dickinson, N., Dzansi, P., Alengdem, J., T. Chimbar and Effah-Appiah, E. (2013) 'The status of rural water services in Ghana. A synthesis of findings from 3 districts', IRC and CWSA, Ghana.
[11] When provided by the private sector.

is haphazard and largely relies on external support from NGOs, donors, and the private sector (through corporate social responsibility). The type of WASH systems varies, and most basic schools lack adequate funding to operate and maintain these essential services as their capitation grant is insufficient. Most schools have little in the way of IGF and are unable to raise funds directly from parents as this goes against the principle of free compulsory universal basic education. Schools that are connected to piped water systems are now facing high water bills from providers and some schools have been disconnected due to pending payments.

- **Capacity gaps in key WASH institutions:** Key WASH institutions – particularly MMDAs' capacities – vary from place to place but generally tend to be weak in the areas of planning, asset management, budgeting, monitoring, and reporting of WASH performance. In addition, MMDAs' capacity in monitoring water resources management and the enforcement of regulations at the local level is weak, which may be due to a lack of logistics resources, such as computers, software, and vehicles.
- **Sectoral focus on WASH access rather service delivery:** There has been overconcentration on infrastructural investments at the expense of support for community development and post-construction activities (e.g., community sensitization, establishment of inclusive community management structures, recurrent cost recovery mechanisms) required for delivering sustainable quality services. This has contributed to high levels of non-functional WASH facilities, poor quality of service from facilities and ever-increasing unserved population partly due to poor asset management which is retrogressive to sector investment efforts over the years.

2.5.3 Financing

Across all WASH sub-sectors there is **inconsistent and inadequate financing from all sources to allow the achievement of sector coverage and performance targets**, and this challenge is being exacerbated by population growth. There is equally a huge gap in the financing necessary to meet international and national commitments. The government's budgetary allocation to the sector has not previously been adequate. There is also limited financing for investment in, and the renewal of, assets, which hampers the expansion and sustainability of WASH services.

3. Programme outline 2023–2030

3.1 WASH sector vision and targets

The GWASHSDP takes into consideration Ghana's medium-term plans and long-term development vision and targets for the sector: to *improve access to safe, affordable, reliable, and sustainable water, environmental sanitation, and hygiene services for all by 2030*. The successful realisation of the WASH sector vision, and targets will primarily depend on the following internal and external factors:

- **Internal dynamics**, such as political stability and commitments, social upheavals, illegal mining, and the government's ability to attract resources such as multilateral, bilateral, and commercial loans, investment from the private sector, and consumer financing.
- **External parameters**, such as general macroeconomic and political stability and an international environment that is congenial for the mobilisation of support (funding and technical assistance), and the commitment of all stakeholders to follow the national processes and standards, are central to the successful implementation and management of the sector vision and targets. In this context, the effects of the global pandemic (COVID-19) have still not been fully assessed but they could adversely redirect global resources and attention, rather than supporting the extension of WASH services to many under-served and/or unserved populations.

3.1.1 Targets

In line with the sector vision of universal WASH coverage by 2030, investments need to be calibrated to address lagging coverage across the various WASH sub-sectors. Reaching the remaining population without water and sanitation services becomes more difficult the closer one gets to full coverage. Moreover, existing services need to be sustained. The GWASHSDP therefore has three different scenarios with regard to setting 2030 WASH targets (see Table 9 below for the scenarios and their targets).

- **Scenario 1: Full funding** – the sector receives all the funding it needs and has adequate capacity to reach a target of 100% safely managed water supply coverage and at least 100% basic sanitation coverage by 2030.
- **Scenario 2: Medium funding** – the sector receives a level of funding halfway between full and minimum funding and assumes estimated coverage will be halfway between Scenario 1 and Scenario 3, at 84% (provider-based data) or 100% (JMP-Basic + safely managed) for water supply and 62% for sanitation by 2030.
- **Scenario 3: Minimum funding** – the sector only receives similar levels of funding as in the past 10 years and it is assumed that coverage will increase at a similar rate as in the past 10 years. This gives an estimated coverage target of 68% (administrative data/provider-based data) or 97% (JMP-Basic + safely managed) for water supply, and at least 36% basic sanitation by 2030.

Table 9: Funding scenarios and targets

Scenario	Current levels*			2025 targets			2030 targets		
Water supply–basic access (safely managed)	Rural	Urban	Total	Rural	Urban	Total	Rural	Urban	Total
Scenario 1 – Full funding	72% (16%)	96% (60%)	86% (41%)	86% (43%)	100% (80%)	91% (68%)	100% (70%)	100% (100)	100% (85%)
Scenario 2 – Medium funding				82% (32%)	99% (74%)	89% (54%)	92 % (48%)	100% (88%)	96% (74%)
Scenario 3 – Minimum funding				78% (21%)	98% (68%)	87% (46%)	84 % (27%)	100% (76%)	92% (59%)
Water supply coverage	Rural	Urban	Total	Rural	Urban	Total	Rural	Urban	Total
Scenario 1 – Full funding	62%	61%	62%	83%	85%	84%	100%	100%	100%
Scenario 2 – Medium funding				77%	78%	78%	88%	100%	96%
Scenario 3 – Minimum funding				70%	70%	70%	80%	80%	80%
Sanitation	Rural	Urban	Total	Rural	Urban	Total	Rural	Urban	Total
Scenario 1 – Full funding	17% (15%)	28% (12%)	24% (10%)	56%	62%	59%	100%	100%	100%
Scenario 2 – Medium funding				35%	44%	40%	58%	65%	62%
Scenario 3 – Minimum funding				14%	27%	22%	17%	30%	25%

* Source: JMP (2021): Water supply: basic service – from an improved water source that involves less than 30 minutes collection time; safely managed: piped to household, available when needed, and free from contamination. Sanitation: basic level of service – use of an improved facility that is not shared with other households.

3.2 Programme components

The GWASHSDP has been anchored around six core programme components: 1) water resources management; 2) water supply (urban and rural); 3) environmental sanitation (liquid waste management and SWM); 4) hygiene (handwashing with soap, safe disposal of faeces, household water treatment systems, and menstrual hygiene management (MHM); e) WASH in institutions (WinS and WASH in healthcare facilities); and 6) cross-cutting issues in WASH (equity and inclusion, gender, and climate change).

To provide strategic direction for the sector, focusing on its priorities, the programme sets out interventions for the identified key challenges, to allow the prioritisation of investments in WASH interventions. The core themes considered under each of the core programme components were categorised under service provision, regulation, finance, and monitoring and evaluation.

3.3 Underlying assumptions for achieving the GWASHSDP targets

The assumptions underpinning the successful implementation of the GWASHSDP are as follows:

- MSWR's leadership and coordination roles are strengthened

and sustained such that it provides a necessary supervisory role in relation to sector agencies, and also ensures the accountability of sector agencies.

- Sector financing will continue to be available.
- MSWR and the MDAs have the capacity to manage the sector in an efficient and effective manner.
- MSWR will ensure that sector planning, monitoring, and reporting formats are followed.

4. Water resources and water supply

The component related to water resources and water supply covers IWRM, urban water supply, and rural water supply.

4.1 Water resources management

This section presents the programme targets, the institutional and legal framework, key challenges, and priority actions to address the challenges. The information provided in this section have been obtained from key informant interviews with the WRC, relevant documents produced by the sector, and stakeholder workshops organised as part of the development of the GWASHSDP.

4.1.1 IWRM targets

Water resources management in Ghana involves several indicators that are used to set the annual targets. The key targets for water resources management are IWRM capacity, water quality, transboundary operations, and basin management. The IWRM targets are shown in Table 10 below.

Table 10: IWRM indicators for the planning period

Category	Indicator	2020 (baseline)[12]	2025 targets			2030 targets		
Water resources management indicators			Min	Med	Full	Min	Med	Full
IWRM capacity	Number of basin boards	6	7	8	10	10	11	13
Water quality	Number of monitoring stations	78	95	108	117	130	140	150
	Ambient water quality	57.8	65	70	75	76	77	78
Transboundary	Number of transboundary basin authorities	1	2	2	3	3	4	5
Basin management	Buffer zones (ha)	25	40	55	75	80	90	100

[12] WRC data.
[13] Castalia (2021) Final Report: Consulting Services for a Study of the Institutional, Policy, Financial and Legal Aspects of the Water and Sanitation Sector in Ghana.

4.1.2 Policy, legal, and regulatory framework

Ghana has in place a clear policy, legal, and regulatory framework for the IWRM sub-sector, as presented in Annex A. However, a recent institutional review[13] suggests that closer collaboration is needed between the WRC and EPA in their functions, to align with the principles of IWRM.

Among the policies and regulations that currently exist, the Buffer Zone Policy, Water Use Regulation (LI 1692), Drilling License (LI 1827) are supposed to be enforced by the MMDAs and the basin boards. However, the Buffer Zone Policy has no legislative backing, hence leading to weak enforcement of the policy. Thus, the policy needs to be legislated to become an enforceable legal instrument. There is also a National IWRM Plan, which was developed in 2012, which should be reviewed after every 10 years in order to capture and address new challenges of IWRM.

The major challenge in the regulation of Ghana's water resources is the enforcement of legislative instruments at all levels. The sector Ministry and Water Resources Commission should give major attention to significantly improve the enforcement of the legal instruments and policies that have been set out for water resources management.

4.1.3 Institutional arrangements

The institutional structure of water resources management is shaped by international treaties, the NWP, administrative structures and stakeholders at various levels.

At the national level, the WRC is mainly responsible for developing policies, targets, and management instruments for regulation. It reports to MSWR and provides the needed information to the NDPC. The WRC manages the river basins on a hydrological boundary level, through the basin boards to coordinate the activities of water resources development and management. The basin boards bring together RCCs, selected MMDAs, traditional authorities, water user associations, and water-related NGOs located within the boundaries of the basin on a single platform. Major water-related developmental projects, challenges, and key activities are discussed and approved at the basin board level for implementation. The basin boards' decisions are guided by the IWRM plan for the basin. There are some MMDAs that are not represented on the basin boards; these MMDAs are represented by their RCCs on the basin board. The MMDAs and the RCCs provide the relevant information for basin board meetings. Furthermore, the MMDAs provide the RCCs with relevant information, which the RCCs submit to the NDPC.

The WRC has started introducing sub-basin boards which are formed on the major tributaries forming each basin. The sub-basin boards comprise the MMDAs that share the water resources of the sub-basin. The sub-basin boards provide the opportunity for all concerned MMDAs to be represented in the management of the water resources. Sub-basin boards have thus far been implemented in the Black and White Volta Basins, while sub-basin boards for other basins are in the process of being established. The sub-basin boards also develop IWRM plans to help achieve the overall IWRM plan for the basin.

The basin boards and the sub-basin boards liaise with the MMDAs in the management of the water resources and the monitoring of IWRM indicators. As part of their routine reporting, MMDAs are expected to capture relevant IWRM data, such as water use registration and groundwater abstraction registration.

4.1.4 Priority actions to address challenges

The priority actions necessary to address the key IWRM challenges identified during the consultative workshops are presented in Table 11 below. Having identified the key challenges and priority actions below, the full programme implementation plan (Annex B) provides details of the cost of addressing priority challenges.

Table 11: IWRM key challenges and priority actions

Priority actions for IWRM		
Key sub-sector challenges	**Priority actions to address challenges**	**Responsible agencies**
Service provision		
Deteriorating water quality	• Collaborate with other sector/agencies to stop illegal mining activities through strengthened legislation, enforcement and sanctions. • Eliminate open defecation and treat municipal and industrial waste • Strengthen catchment management initiatives, such as buffer zone protection • Enhance public awareness and education of water resource management issues	MMDAs/WRC
Limited integration of IWRM and WASH services	• Formalise bi-annual meetings between WRC, GWCL, and CWSA for planning catchment management and water supply • Integrate basin-level and MMDA plans to foster active engagement among stakeholders to inform effective WASH planning and implementation. • The development of water resources management annual plans should be linked to sanitation and SWM and vice versa	WRC/GWCL/ CWSA
Impact of climate variability on water and other natural resources	• Mainstream climate resilience in WRC, CWSA, GWCL, and Environmental Health and Sanitation Directorate (EHSD) activities • Incentivise households (such as through the provision of technical guidelines and standards) to increase rainwater harvesting	WRC/GWCL/ CWSA/ MMDAs
Weak water resources management at the district level	• Formalise bi-annual meetings between basin boards and MMDAs within the basin • Implement sub-basin boards to effectively manage water resources, and build the capacity of MMDAs to support water resources management	MMDAs
Pollution of international rivers	• Enhance transboundary and international cooperation in the management of shared water resources through transboundary bodies such as Volta Basin Authority. • Establish a transboundary body for the Tano and Bia Basins.	WRC/MMDAs

Priority actions for IWRM		
Key sub-sector challenges	**Priority actions to address challenges**	**Responsible agencies**
Service provision		
Limited professionals to execute planned activities, especially for monitoring and ensuring compliance	• Conduct a capacity needs assessment for WRM at all levels and roll out tailored training programmes in specific technical areas • Increase staff at the WRC according to the requirements • Establish and strengthen the sub-basin committees • Include IWRM in the trainings organised at the Local Government Training Institute	WRC/ Office of the Head of Local Government Service (OHLGS)/ Institute of Local Government Studies
Regulation		
Limited capacity to enforce regulations on abstraction/drilling permits and to ensure compliance with permit terms	• Strengthen the regulatory framework for managing and protecting water resources for improved water security and enhanced resilience to climate change • Establish clear roles and responsibilities at all relevant levels in the implementation of LIs • Provide capacity building support to MMDA for effective prosecution	MSWR MSWR/MMDAs
Catchment degradation and deterioration in water quality	• Ensure effective enforcement of laws and policies at the district level • Establish appropriate Legislative Instruments (Lis) for effective implementation of policies such as those related to Buffer Zone	MMDAS
Finance		
Budget disbursement remains largely insufficient; funds are allocated for most IWRM elements, but are largely insufficient to meet planned expenditure	• Ensure provision of adequate budgetary allocations for water resources management at both national and sub-basin levels. • Increase funding support and self-financing capability through water permits, licensing, etc. • Conduct a study on water resource management financing in Ghana to identify feasible and sustainable financing streams • Ensure the effective implementation of regulations needed to increase IGF	MoF/MLGDRD
Monitoring and evaluation		

Priority actions for IWRM		
Key sub-sector challenges	**Priority actions to address challenges**	**Responsible agencies**
Service provision		
Inadequate information on water quality and groundwater resources, resulting from poor systems for collecting reliable hydrologic, meteorological, and water quality data	• Improve access to knowledge and expertise in IWRM to facilitate water resource planning and decision-making • Set up adequate monitoring points for all river basins and aquifers in Ghana • Address institutional gap for groundwater data, and increase data collection points to optimum level for all • Provide adequate funding for groundwater studies and other related activities	WRC/MMDAs

4.2 Urban water supply

The water supply coverage for urban areas is 78% (2020) and for rural areas it is 63% (2020), based on administrative data from GWCL and CWSA. The GWASHSDP needs comprehensive and up to date MIS information so that planned water supply inputs can be routinely assessed against annual and long-term coverage targets. It is therefore expected that Table 12 below will be updated with improved MIS data. Surveys (conducted by Ghana Statistical Services (GSS)) are useful way to verify progress but are about two to three years out of date and cannot be relied upon for planning, programming and timely decision making.

Table 12: Urban water supply targets for the sector

Category	Service levels/ indicators	2020 (baseline)[12]	2025 targets			2030 targets		
Water supply indicators			**Min**	**Med**	**Full**	**Min**	**Med**	**Full**
Urban water	GWCL coverage (%)	61 %	66%	73%	80%	71%	86%	100%
	Total – at least basic* (Safely managed) *	96% (60%)	97% (68%)	98% (74%)	100% (80%)	100% (76%)	100% (88%)	100% (100%)
	NRW (%)	47%	45%	43%	40%	43%	39%	35%
	NRW (%)	85%	90%	95%	100%	95%	98%	100%
	Number of water systems with Water Safety Plans operational	7	25	60	82	82	82	82

*WHO/UNICEF JMP 2021

The definitions of SDG water service levels are presented in Table 13 below.

Table 13: The SDG definition for water supply service levels

Service level	Definition
Safely managed	Drinking water from an improved water source that is located on premises, available when needed, and free from contamination
Basic	Drinking water from an improved source, provided the collection time is not more than 30 minutes for a round trip, including queuing
Limited	Drinking water from an improved source for which the collection time exceeds 30 minutes for a round trip, including queuing
Unimproved	Drinking water from an unprotected dug well or unprotected spring
Surface water	Drinking water directly from a river, dam, lake pond, stream, or canal

4.2.1 Urban water supply service level standards

To achieve the desired urban water supply service standards, it is essential to monitor the water service level using multiple indicators. GWCL technical standards for water service are provided in Table 14 below.

Table 14: Urban water supply service level criteria and standards

Level of service	Criteria	Technical standards	Service providers
Safely managed	Improved water source Located on premises Available when needed (24/7) Free from contamination	Water demand (litres/capita/day) assumptions: • 140 (Accra) • 125 (> 50,000 pops.) • 100 (20,000–50,000 pop) • 85 (10 000–20,000 pop.)	GWCL providing piped schemes with urban household connections
Basic	Improved water source Within a 30-minute round trip	Assumes each standpost serves 350 urban people	GWCL providing piped networks with water kiosks/standposts for urban populations
Limited	Improved water source Greater than 30-minute round trip	Assumes each standpost serves 250 for urban	As above

4.2.2 Policy, legal, and regulatory framework

The policy, legal, and regulatory framework for urban water supply is described in detail in Annex A.2. The policy framework is not very clear on GWCL's service area, the percentage of households within that service area that should receive piped water, the target date for achieving goals, and monitoring and evaluation systems[14]. The national Drinking Water Quality Management Framework provides guidance on procedures to ensure urban water supply is safe for all users. The ongoing reform in the rural water sector, in which CWSA intends to be a utility, may have implications for urban water supply tariffs and the clear delineation of urban and rural water service areas.

4.2.3 Institutional arrangements

GWCL has responsibility for providing urban water services but is unable to serve the whole population in urban areas. As a result, alternative water service providers operate in the urban space, such as tanker services, mechanised boreholes, vendors, cart operators, self-suppliers, etc. Furthermore, a lot of urban dwellers use packaged water – bottled water and sachet water for drinking.

The NDPC, in operationalising the Coordinated Programme of Economic and Social Development of the President of the Republic, collaborates with MSWR to set the national vision and targets for the WASH sector. This is done through the guidelines provided for the preparation of MTDPs by MDAs and MMDAs.

The WRC regulates and manages water resources in Ghana to ensure the availability of adequate raw water for urban water supply. The regulatory tools for water resources management include the requirement for abstraction rights, driller licences, buffer zones to protect water bodies, and waste discharge guidelines. GWCL signs a performance contract with SIGA to ensure efficient operations. PURC has the mandate to regulate GWCL tariffs and quality of urban water services provided by GWCL. Water provided by GWCL must meet the water quality standards prescribed by the GSA. Packaged water produced and marketed in urban areas is regulated by the FDA.

The GWCL provides data on urban water supply in the country by focusing mainly on services provided. This may not provide complete data as some urban populations obtain their water supply services from other service providers such as tanker services, CWSA, self-supply (private boreholes), and private suppliers. Sector engagement platforms such as the National Level Learning Alliance platform (NLLAP), Technical Working groups etc that enhance sector coordination, information sharing, and learning should be mainstreamed in sector programming. Specifically, there should be dedicated slot on NLLAP to share and discuss issues on urban water supply. Sector agencies at the national and sub-national levels are expected to establish a functional MIS to generate relevant information for decision-making and reporting.

4.2.4 Priority actions to address urban water challenges

The key challenges and priority actions necessary to improve urban water supply performance are presented in Table 15 below. Having identified the key challenges and priority actions below, the full programme implementation plan (Annex B) provides details of the cost of addressing priority challenges.

[14] Castalia 2021: Study of the Institutional, Policy, Financial and Legal Aspects of the Water and Sanitation Sector in Ghana

Table 15: Key challenges and priority actions for urban water supply

Priority actions for urban water supply		
Key challenges	**Priority actions to address challenges**	**Responsible agencies**
Service provision		
Limited water coverage	• Institutionalise collaboration between MMDAs and GWCL for comprehensive town/city-wide planning to ensure water services for all, informed by situation analysis to understand the specific needs of people living in low-income areas. • Extend urban water services to peri-urban areas based on a clear and fair connection policy for households living a long way from the network. • Establish a social connection fund (water surcharge) for investment in urban water infrastructure to address equity and inclusion issues	MSWR/MLGDRD/MMDAs/GWCL
Limited household connections for the poor	• Subsidise the cost of new service connections for the poor. • Implement a social connection policy to improve equity and inclusion in urban water supply. • Provide financing opportunities with reasonable interest rates for low-income and poor families for water connections. • Mobilise and strengthen the representation of low-income urban customers. • Strengthen the GWCL Low-Income Customer Support Unit set up for service delivery to the poor to ensure low-income urban communities largely enjoy a direct and regular water service from GWCL.	• MoF/MSWR/GWCL
High non-revenue water (NRW)	• Initiate and sustain measures to reduce NRW, including establishing district metered areas, conducting research into water loss management, prioritising infrastructure investment to replace the aged, piped network, and improving billing and fee collection performance.	• GWCL

Water quality and quantity from water sources becoming unreliable	• Implement Water Safety Plan actions in accordance with the National Drinking Water Quality Management Framework. • Link IWRM and catchment management interventions through effective collaboration among GWCL, WRC, MMDAs, and relevant basin and sub-basin boards.	• MSWR/GWCL/MMDAs/WRC
Potential of private sector investment not realised	• Develop an urban water framework that incentivises private sector (including local) investment enterprises in the rehabilitation and expansion of water systems.	• GWCL/CWSA
Regulation		
Weak accountability for services to the poor	• PURC should include key performance indicators for services reaching the poor and should publish this information publicly. • PURC and GWCL should ensure customer charter is known and used.	PURC/GWCL
Water quality from private schemes and self-supply not effectively regulated	• Strengthen MMDAs to regulate the quality of services provided by private schemes and self-supply, based on risk analysis. • Review the water quality regulatory requirement for private schemes and self-supply, based on risk analysis. • MMDAs should develop guidelines for self-supply to reduce risk (technology options guide, minimum construction standards, household water treatment and storage (HWTS These guidelines should be enforced through sustained house visits by the Environmental Health Officers.	MSWR/MMDAs
Increasing reliance by urban consumers on unregulated bottled and sachet water for drinking	• MMDAs and the FDA should strengthen the regulation of sachet water manufacturers to ensure they meet specified production standards. • GWCL should improve the quality of drinking water to restore consumers' confidence in utility services, and to dissuade over-reliance on unregulated drinking water sources.	MMDAs/FDA/ GWCL
Monitoring and evaluation		

MIS for urban water cannot provide comprehensive information on SDG indicators	• Establish an urban water MIS that shows the proportion of households with access to piped connections, kiosks/stand-posts and self-supply. • GWCL should establish database on low-income urban communities for effective monitoring of performance in providing them with services.	GWCL/MSWR

4.3 Rural/community water supply

Rural water supply (also called community water supply) covers rural communities and small towns. In 2020, the community water supply coverage was 62%. However, according to a CWSA report, several regions have coverage rates below the national average: Ashanti 58%, Eastern 56%, Savanna 54%, and Western Region 57%. The most common technologies for water supply in rural areas are boreholes, shallow wells, and piped networks based on mechanised or gravity-based systems. The main service providers are the MMDAs, CWSA, NGOs, and the private sector. The rural water supply targets for the period covered by the GWASHSDP are shown in Table 16.

Table 16: Rural water supply targets for the sector

Category	Indicator	2020 (baseline)*	2025 targets			2030 targets		
Water supply indicators			**Min**	**Med**	**Full**	**Min**	**Med**	**Full**
Rural water	CWSA coverage (%)	62%	70%	77%	83%	80%	88%	100%
	Total – at least basic* (Safely managed) *	72% (16%)	78% (21%)	82% (32%)	86% (43%)	84% (27%)	92% (48%)	100% (70%)
	NRW (%)	25%	23	22	20%	21	18	15%

*WHO/UNICEF JMP 2021

4.3.1 Rural water supply service level standards

CWSA technical standards for water service levels (both rural and urban) are provided in Table 17 below.

Table 17: Rural water supply service level criteria and standards

Level of service	Criteria	Technical standards	Service providers
Safely managed	• Improved water source • Located on premises • Available when needed (24/7) • Free from contamination	• Water requirements – 100 l/c/d	**Public investment:** • CWSA providing piped schemes with rural household piped connections **Private investment:** • Private sector providing piped schemes with rural household piped connections • Rural households invest in their own individual boreholes/shallow wells on premises (self-supply)
Basic	• Improved water source • Within a 30-minute round trip	• Borehole serves 300 persons and hand-dug well serves 150 persons • Assume a water requirement of 100 l/c/d for small towns	**Public investment:** • CWSA providing piped schemes with water kiosks/standposts for rural populations • MMDAs/NGOs providing water points from borehole, protected springs/wells, and standpost water from mechanised bore-holes for rural populations **Private investment:** • Private sector providing piped schemes with standpipes for rural populations • Private sector providing standpost water from mechanised bore-holes for rural populations
Limited	• Improved water source • Greater than 30-minute round trip	Assumes each standpost serves 300 persons for rural Assume a water requirement of 20 l/c/d	• As above

4.3.2 Rural water policy, legal, and regulatory framework

The policy, legal, and regulatory framework for rural water supply is described in detail in Annex A.3. The rural water sub-sector is currently undergoing reforms. Consequently, most of the policy, strategies, and guidance documents are due to be revised in line with the new role of CWSA. CWSA is being transformed into a utility company which will operate the water supply systems in small towns, which have previously been managed by the MMDAs and communities. Due to the ongoing reforms, there is a need to clarify the role of the MMDAs and the regulatory mechanism for rural water service delivery. The regulation of water quality, tariffs, quality of service, and the activities of private sector providers (such as self-suppliers, vendors, and tanker operators) need to be clarified.

4.3.3 Institutional arrangements

CWSA is the facilitating agency for rural and small towns water supply in Ghana. As part of the reform of the rural water sub-sector, CWSA's role is changing to that of a water utility that will focus on small towns and will continue to provide support to the DAs and communities in the management of point water systems. In addition, the private sector and NGOs will continue to provide water services to inhabitants in rural areas. Inhabitants in rural and small towns also purchase packaged water (bottled water and sachet water) for drinking, provided by the private sector. Private sector entities, additionally, provide goods, services, and works, and sometimes act as operators. MMDAs/CWSA have delegated some piped schemes to private sector management.

The NDPC collaborates with MSWR and its agencies to set the national vision and targets for the WASH sector. MMDAs report to the NDPC through their RCC on activities captured in their respective Medium Term Development Plans (MTDP). The WASH activities are reported using a few high-level indicators required by the NDPC, but these are not sufficient for the WASH sector. As a result, more detailed WASH reporting is required by the MMDAs (see Annex C for the MMDA WASH sector reporting template).

The WRC regulates and manages water resources in Ghana to ensure the availability of raw water with the required quality and quantity for rural and small towns water supply. SIGA signs a performance contract with CWSA to ensure efficient operations and the FDA regulates packaged water. Drinking water must meet GSA standards for drinking water in Ghana. CWSA has supported the sector with the development of an MIS to generate relevant information for rural water supply, but this is only operating in some DAs and is not fully operational at scale.

Priority actions to address rural water challenges

Some key challenges, and priority actions that are necessary to improve the performance of the rural water supply sub-sector, are presented in Table 18 below. Having identified the key challenges and priority actions below, the full programme implementation plan (Annex B) provides details of the cost of addressing priority challenges.

Table 18: Key challenges and priority actions for rural water supply

Priority actions for rural water supply		
	Priority actions to address challenges	**Responsible agencies**
Service provision		
Low rural water coverage	• MMDAs should collaborate with key stakeholders (GWCL, CWSA, and WRC) to prepare WASH plans and strategies to cover entire city/towns and districts to achieve universal access. • WASH plans should be linked with WASH budgeting, performance reporting, and monitoring and evaluation.	MSWR/MMDAs/GWCL/CWSA/WRC
Wide spatial inequities in rural water supply coverage	• Enhanced coordination and harmonisation of rural WASH planning led by CWSA and ensuring contributions from government, private sector, self-suppliers, donors, and NGOs. • Improve MIS for identifying areas with low coverage and that are hard to reach, to inform the planning process. • CWSA to prepare water supply technology options guide for different contexts to support community water and sanitation services delivery.	MSWR/MMDAs/CWSA/CONIWAS
High number of non-functional water point	• Improve sustainability through system strengthening, such as management capacity, tariff structure, operations and maintenance (O&M) support services, and post-construction support activities. • Capacity building support to community management of point sources by MMDAs on technical, financial management, and accountability to users. • Consolidate the reforms in the community water and sanitation sub-sector, which seek to professionalise the post-construction management of water supply services. • Introduce new digital technologies to enhance operational efficiency.	MMDAs/GWCL/CWSA

High number of non-functional water points	• Improve sustainability through system strengthening, such as management capacity, tariff structure, operations and maintenance (O&M) support services, and post-construction support activities. • Capacity building support to community management of point sources by MMDAs on technical, financial management, and accountability to users. • Consolidate the reforms in the community water and sanitation sub-sector, which seek to professionalise the post-construction management of water supply services. • Introduce new digital technologies to enhance operational efficiency.	MMDAs/GWCL/CWSA
Water quality and quantity from water sources becoming unreliable	• Implement Water Safety Plan in line with the National Drinking Water Quality Management Framework. • Link IWRM and catchment management interventions with rural water supply through effective collaboration among CWSA, GWCL, WRC, MMDAs, and relevant basin and sub-basins boards.	MSWRCWSA/GWCL/ WRC
Inadequate capacity of MMDAs on procurement, accountability, contracting, and supervision works and services	• MMDAs should build the capacity of key staff on procurement, accountability, and supervision of works and services. • Engage private sector with relevant capacity to support supervision of works and services. • CWSA should support MMDAs with standard designs and other technical guidelines as well as provide backstopping in procurement, supervision and monitoring of works and services.	MMDAs/CWSA

Finance		
Investment insufficient to meet sub-sector targets	• Increase financing for community water supply through innovative financing mechanisms. • Leverage private sector and NGO investments through improved enabling environment for investing (e.g., PPP arrangements), and managing and setting their own cost-reflective tariffs. • Encourage self-supply to provide safe water supply services in accordance with approved standards and routine monitoring.	MoF/Private sector/NGOs
Regulation		
Weak regulation of piped water supply schemes	• Expand scope of PURC to cover piped water schemes provided by CWSA and other service providers. • Ensure strict adherence to sector regulations and standards for piped water schemes, including CWSA and self-supply systems.	PURC/MSWR/CWSA
Poor-quality water supply infrastructure	• Strengthen accountability for supervision, monitoring and contract sign-off by MMDAs.	MMDAs
Deteriorating water quality	• Ensure effective regulation of Water Safety Plan implementation.	PURC/MSWR
Monitoring and evaluation		
Inadequate and patchy MIS on rural water services	• Policy Planning and Budget Monitoring and Evaluation Unit of MSWR and the NDPC should support MMDAs to establish functional rural water MIS to provide data and information.	MSWR/NDPC/MMDAs

5. Environmental sanitation

This chapter discusses environmental sanitation, which is one of the core components of the GWASHSDP. This component covers liquid waste management, solid waste management (i.e., household waste, e-waste, plastics, etc…), and hygiene (i.e., handwashing with soap, safe disposal of faeces, household water treatment systems, and MHM). These areas are guided by the ESP 2010 and NESSAP 2014, which focus on developing and maintaining a clean, safe, and pleasant physical environment in all human settlements in Ghana. Progress on improving the environmental sanitation situation has been very slow despite implementing policies and programmes by the government and WASH sector partners. It is estimated that over 50% of the human excreta produced in cities end up in the environment untreated.[15] In terms of SWM, there are still challenges, such as asymmetrical waste collection. An estimated 44% of solid waste generated across the cities of Ghana is collected, leaving a backlog of 56%, [16] which is disposed of through inappropriate means. To provide strategic direction for the sector, focusing on its priorities, interventions to address the identified key challenges are provided. To prioritise investment for sustainability, the environmental sanitation interventions are focused on service provision, regulation, finance, and monitoring and evaluation.

5.1 Liquid waste management

There is an urgent need to develop better ways to manage liquid waste in Ghana, as sanitary and environmental conditions in many areas are threatening both public health and natural resources. Liquid waste management aims to protect the environment from faecal pollution and hence prevent and/or reduce faecal pathogens that transmit diseases such as acute diarrhoea, cholera, and others. The broad categorisation of liquid waste is (a) Greywater: wastewater generated from bathing, washing, general cleaning, laundry, as well as from community stand post, water wells, hand pumps; (b) Blackwater: Wastewater generated from toilet containing faecal matter. Such water contains very high number of pathogens compared to greywater; and (c) Faecal Sludge: a mixture of human excreta, water and solid wastes in pits, tanks or vaults of onsite sanitation systems.

The liquid waste is managed by using sewerage systems and non-sewerage systems. The sewerage systems consist of the collection of sewage from point of generation (houses, institutions, hotels etc) by sewer systems to a sewage treatment plant (STP) or wastewater treatment plants (WWTPs). These STPs are offsite treatment systems. Non-sewerage systems encompass all sewage waste disposal systems that are not connected to sewer lines (typically, they are onsite systems) and any treatment (partial or complete) is done at the point of generation.

Sewerage systems

The sewerage system in Ghana collectively serves an estimated 5% of the country's population. There are currently around 70

[15] Mansour, G. and Esseku, H. (eds.) (2017) 'Situation analysis of the urban sanitation sector in Ghana', Urban Sanitation Research Initiative Ghana, WSUP, Ghana. www.wsup.com/content/uploads/2017/09/Situation-analysis-of-the-urban-sanitation-sector-in-Ghana.pdf

[16] Kyere, R., Addaney, M., Ayaribilla Akudugu, J. (2019) 'Decentralization and Solid Waste Management in Urbanizing Ghana: Moving beyond the Status Quo. Municipal Solid Waste Management', IntechOpen, doi:10.5772/intechopen.81894

sewerage systems operating and all of them serve very few urban populations in a few cities and towns. These include systems in places like Accra, Tema, Kumasi, Akosombo, as there are also minor institutional schemes across various institutions including the military barracks, campuses of universities, teaching hospitals etc. Sewage is typically transported through sewers (piping) system with the aid of pumping stations to final treatment systems prior to discharge and disposal into the environment.

Non-sewerage systems

About 76% of the Ghanaian population are served by on-site sanitation facilities...[17] Only one in every five households in Ghana have access to basic sanitation service. An estimated 22% of Ghanaians practise open defecation (31% and 11% for the rural and urban populations, respectively). This requires interventions across the whole sanitation value chain from containment to end-use and/or disposal, as described below (see Figure 7).

Figure 7: Liquid waste management value chain

Containment

Larger fraction of human excreta in Ghana is stored at or near the household through on-site sanitation systems and either treated and disposed of in situ or periodically removed for treatment off-site. The technologies used for excreta containment (onsite) in Ghana include the following toilet typologies: pit latrines, ventilated improved pits (VIPs), Kumasi VIPs, biodigester toilets and flush toilets (pour flush and water closet connected to septic tanks) (see Table 19). For sewerage systems, faecal matter leaves the user interface (flushing unit e.g., toilet bowls) and transported to the treatment plant (offsite).

[17] GSS (2018)'Snapshots on key findings, Ghana Multiple Indicator Cluster Survey (MICS 2017/18), Survey Findings Report, Accra, Ghana, www2.statsghana.gov.gh/docfiles/publications/MICS/Ghana MICS 2017-18. Summary report – consolidated Snapshots 23.11. 2018 (1).pdf

Table 19 below summarises the distribution of the population by types of sanitation facilities accessed in Ghana.

Table 19: Distribution of sanitation technologies in Ghana

UNICEF/WHO classification	Multiple Indicator Cluster Survey (MICS) classifications	Distribution (%)
Open defecation	Open defecation	22
Improved/Basic	Water closet/pour flush to piped sewer system, septic tanks or pit latrines	20
	VIP/KVIP	22
	Pit latrine with slab	18
	Other	5
Unimproved	Bucket/pan	13
Total		**100**

Source: GSS (2018); MICS 2017/18

Collection and transportation

This phase of the sanitation service delivery chain involves getting the sludge out of containment systems especially from onsite sanitation systems (OSSs). Excreta from households that depend on sewer connections (<5%) are rather conveyed immediately after toilet flushing through sewer lines to treatment facilities off-site. These including some parts of the key cities and towns (e.g., Accra, Tema, Kumasi, Tamale and Akosombo) have a sewer network for few households. However, majority of Ghanaians relying on OSSs mostly have their excreta move through containment, collection and transportation to treatment and/or disposal.

For on-site facilities, excreta are collected in two ways: either through manual labour or by mechanised means. Typically, excreta from on-site facilities are removed and transported for off-site treatment or are treated and safely disposed of in situ. Sludge emptying is mostly by mechanised means using vacuum trucks, except in informal settlements, where mechanised emptying is practically impossible. In urban areas, the emptying and transportation aspects of the sanitation service chain are dominated almost entirely by private sector operators. For example, in GAMA, about 148 vacuum trucks (98% private sector owned) provide desludging services when toilet tanks are full. A vacuum truck operator charges an emptying fee to households, depending on the capacity of the service truck requested. The city authorities only get involved when operational licences or permits are supposed to be obtained/renewed and dumping or tipping fees must be paid at treatment and/or disposal sites.

Treatment and disposal

After collection, sludge is usually transported to FSTPs/WWTPs, where available, for treatment. Typically, FSTPs/WWTPs only receive a fraction of urban faecal waste as most of the population use on-site systems. FSTPs are beginning to emerge in some urban centres.

About 43% of excreta generated from on-site facilities are treated and safely disposed in situ. Generally, off-site treatment and disposal facilities are absent in most places including cities. Where treatment facilities exist (e.g., Kumasi, Accra, Tema, Tamale) they are located at very long distances on the outskirts of the city, leading to illegal dumping of collected sludge at the shortest possible distance, where they present environmental and health risks. Out of about 24 sludge treatment plants in Greater Accra, only 16 (67%) are functional; the rest are either malfunctioning (17%), abandoned (8%), or being rehabilitated (4%). For systems where excreta are transported off-site (sewer connection) for treatment, there is limited information on the proportion of safely managed excreta. Table 20 presents the baseline service levels and the targets for the 2025 and 2030 reporting periods. Given full funding, it is expected that by 2030 there will be no unserved, shared, or basic sanitation services: 100% will be safely managed. This implies that there will have to be improved in sewer connection services including expansion works as well as adequate onsite systems with across-the-board functional liquid waste management value chain. Suppose minimum to medium funding levels are provided to support the programme, then there will be no unserved population, shared service could be reduced to the barest minimum of 5–10%, a larger population size could receive between basic (30–63%), and safely managed (27–65%) sanitation by 2030 (Table 20). The service level definitions are based on the SDGs (Table 21).

Table 20: Service levels and targets for sanitation in Ghana

Category	Service levels	2020 (baseline)*	2025 targets			2030 targets		
			Min	Med	Full	Min	Med	Full
Urban sanitation	Safely managed	12%	27%	44%	62%	30%	65%	100%
	Basic	28%	32%	33%	23%	60%	30%	0%
	Shared	56%	41%	23%	15%	10%	5%	0%
	Unserved**	4%	0%	0%	0%	0%	0%	0%

[18] Rohilla, S. K., Agyenim, F. B., Luthra, B., Padhi, S. K., Quashie, A. S., and Yadav, A. (2019) 'Integrated Wastewater and Faecal Sludge Management for Ghana: Draft Guidelines', Centre for Science and Environment, New Delhi.

Category	Service levels	2020 (baseline)*	2025 targets			2030 targets		
Rural sanitation	Safely managed	15%	20%	35%	56%	27%	58%	100
	Basic	17%	30%	40%	39%	63%	37%	0%
	Shared	34%	30%	10%	5%	10%	5%	0%
	Unserved**	34%	20%	15%	10%	0%	0%	0%

*WHO/UNICEF JMP 2021, 'Progress on Household Drinking Water, Sanitation and Hygiene (2000–2020)'. **Unimproved and open defecation.

SDG definitions for sanitation

The GWASHSDP adopts the SDG indicators and definitions for sanitation service levels (see Table 21). The indicators are measured as the share of the population using safely managed, basic, limited, and unimproved sanitation facilities, and those practising open defecation (as defined).

Table 21: SDG definitions for sanitation service levels

Service Level	Definition
Safely managed	Use of improved facilities that are not shared with other households and where excreta are safely disposed of on-site or are transported and treated off-site
Basic	Use of improved facilities that are not shared with other households
Limited	Use of improved facilities that are shared with two or more households (including public toilets)
Unimproved	Use of pit latrines without a slab or platform, hanging latrines, or bucket latrines
Open defecation	Disposal of human faeces in fields, forests, bushes, open bodies of water, beaches, or other open spaces, or with solid waste

5.1.1 Standards and criteria for household sanitation service levels

The GWASHSDP uses the JMP sanitation service ladders as a benchmark to measure progress in sanitation coverage and to facilitate enhanced monitoring. The sanitation ladders build on the established improved/unimproved facility type classification and introduce additional criteria relating to the level of service provided to households (see Table 22). Improved sanitation facilities are divided into three categories: limited, basic, and safely managed services. According to JMP standards, improved

sanitation facilities are designed to hygienically separate excreta from human contact. These include wet sanitation technologies (flush and pour flush toilets connecting to sewers, septic tanks, or pit latrines) and dry sanitation technologies (VIP latrines, pit latrines with slabs, or composting toilets). Improved facilities that are not shared count as either basic or safely managed services, depending on how excreta are managed. The JMP criteria classify households using improved sanitation facilities shared with other households (e.g., compound toilets, community toilets, or public toilets) as having a 'limited' service. Table 22 provides the service levels standards and criteria for sanitation.

Table 22: Standards and criteria for household sanitation

Level of service	Criteria	Standards	Service options
Safely managed	**Sewered sanitation:** • Flush toilet • Connected to a sewer • Sewer connects to wastewater treatment facility	**Improved toilets:** • Water closet, pour flush toilets, Kumasi VIP, VIP, Biodigester (e.g., Biofil), improved pit latrines • On-site sanitation in situ • Old pit cover and new latrine built	**Public investment:** • Sewerage network • Wastewater treatment facility **Private investment:** Household flush toilets and connection pipes
	On-site sanitation • Improved toilet • Safely emptied and transported to a treatment facility, OR • Waste treated or disposed of in situ		**Private investment:** • FSTPs • Regulation of emptying services **Private investment:** • Improved household toilets • Septic tank for flush toilets • Pit/septic tank emptying service
Basic	• On-site sanitation not shared with other households		**Private investment:** • Improved household toilets
Limited	• On-site sanitation shared with two or more households (e.g., tenants sharing a household facility) • Public / communal toilets	• Public toilets must be clean, safe, and provide handwashing services • Waste from public toilets must be safely disposed of through sewers or safely emptied / transported and treated off-site)	Public investment: • Public/communal toilets Private investment: • Improved household toilets • Pit/septic tank emptying service

5.1.2 Policy, legal, and regulatory framework

The main legal act governing the provision of sanitation services is the Local Governance Act 938 (2016), supported by the main policy (ESP 2010) and sector strategy (NESSAP 2014). The Act establishes the legal and institutional framework for local governance and assigns MMDAs the full constitutional responsibility for managing sanitation service provision at the local level. The policies, strategies, plans, guidelines, and regulatory instruments reflect the changing context of national, regional, and global sanitation developmental priorities. The main legal acts, policies, strategies, manuals, and regulatory instruments for sanitation are summarised in Annex A.

5.1.3 Institutional arrangements

Sanitation service delivery is decentralised, with national-level institutions providing the policy and monitoring frameworks, while MMDAs are responsible for implementation at the local level. MSWR is responsible for policy formulation, harmonisation, and coordination of sanitation activities, through its Environmental Health and Sanitation Directorate (EHSD). MMDAs have responsibility for planning, budgeting, and implementation, based on local priorities and guidelines provided by the NDPC.

The institutional setup, and the corresponding roles and responsibilities for environmental sanitation services in Ghana, are presented in Table 23.

Table 23: Institutional roles and responsibilities for environmental sanitation sub-sector

Institution	Roles and responsibilities
Ghana central government	• Allocates funds through the national budget to sector MDAs for liquid sanitation activities. • Allocates funds through the national budget to MMDAs for liquid sanitation activities.
NDPC	• Regulates the decentralised planning system; monitors, evaluates, and reports on liquid sanitation as one of the priority interventions within the government's MTDP and national development agenda as a whole.
MSWR-EHSD	• Policy formulation, harmonisation, and coordination of liquid sanitation activities.
MLGDRD	• Facilitates funds mobilisation for the provision of liquid sanitation services at local government levels
National Sanitation Authority (NSA) [19]	• Will have the regulatory function of setting national standards for liquid sanitation and managing the National Sanitation Fund.
CWSA	• The lead agency mandated to facilitate the provision of sanitation services to rural communities and small towns. It has historically provided technical assistance, authored policy, guidelines, and regulations, and developed infrastructure for rural WASH. It is now transitioning into being a water utility for small towns.
RCCs	• Responsible for coordinating, monitoring, and evaluating the performance of MMDAs and monitoring the use of all funds allocated to MMDAs by any central government agency. • Serves as the arbiter of inter-district disputes but holds little regulatory leverage.

[19] Discussions are ongoing on establishing the NSA to promote public health through the provision of sustainable environmental infrastructure and services and practice within the country.

Institution	Roles and responsibilities
EPA	• Monitors and enforces liquid standards and regulations.
MMDAs (Waste Management Departments/Environmental Health Units (EHU))	• MMDAs have autonomy for planning, budgeting, and implementation, based on local priorities and guidelines provided by the NDPC (on planning) and the MoF (on budgeting and expenditure reporting).
NGOs	• Provide WASH infrastructure and service delivery at the local level. • Support sector learning to inform policy and strategy formulation.
Private sector	• Provides goods and services for liquid sanitation. • Provides funding for liquid sanitation services.
Water and Sanitation Management Teams	• Manage community WASH systems (including basic sanitation) in small towns and rural areas.
Beneficiary communities	• Provision and maintenance of private sanitation facilities. • Payment of user or service delivery charges to service providers. • Complaints and demands for quality services from service providers.

5.1.4 Key actions to address liquid waste management challenges

Although the liquid waste management component of the environmental sanitation sector has recorded some successes, some key challenges still exist. Priority actions to address these key sub-sector challenges are presented in Table 24. The top strategies for implementation are prioritising the acceleration of access to safely managed sanitation services to meet targets, improving FSM, and improving transparency and accountability through effective monitoring and evaluation systems (details are provided in the programme implementation plan – see Annex B).

Table 24: Priority actions for key challenges in the liquid waste management sub-sector

Priority actions for sanitation		
Key sub-sector challenges	**Priority actions to address challenges**	**Responsible agencies**
Service provision		
Limited coverage of household toilets	• Strengthen mobilisation efforts, demand generation, and sanitation marketing, and improve enabling environment for household toilet provision. • Capacity building support for public and private sector to streamline the activities and contributions of all stakeholders. • Institutionalise a pragmatic targeted subsidy for low-income household toilet provision to improve affordability.	• MSWR/MLGRD/ MMDAs/ Private Sector/ Households

Priority actions for sanitation		
Key sub-sector challenges	**Priority actions to address challenges**	**Responsible agencies**
Service provision		
Poor-quality household toilets that are not durable	• Provide guidelines on appropriate and affordable standard toilet options for different contexts (e.g., difficult terrain, such as rocky/sandy/ water-logged soils, overcrowding, etc.). • Build capacity and certify private sector (including local artisans) and communities to deliver quality services options, bundled with innovative financing regimes for households. • MMDAs should institute effective monitoring and supervision of household toilet construction through regular visits by EHOs and enforcement of byelaws.	• MSWR/MLGRD/ MMDAs/ Private Sector/ Households
Household toilets are not feasible due to overcrowding and informal settlements with no land tenure	• Conduct comprehensive studies on ways to address low-income areas with challenging terrains, including understanding appropriate technology/service options, such as container-based sanitation and other types of 'shared' toilets that should be considered acceptable. • Monitor service providers' performance (e.g., via performance indicators in contracts) in addressing the needs of poor and vulnerable users. • Develop service levels for acceptable and well-managed public/ communal toilets for overcrowded areas where such facilities are the best alternatives.	• MSWR/MLGRD/ MMDAs/ Private Sector/ Households
High prevalence of open defecation	• Develop national open defecation free (ODF) strategy/plans and campaign drives for stopping open defecation. • Publicise the national ODF plan and strengthen accountability mechanisms for MMDAs. • Strengthen public education on the consequences of open defecation. • Continue to use the ODF league table to drive improvement.	• MSWR/MLGRD/ MMDAs/ Sector/ Households
Poor management of municipal and industrial wastewater	• Build human resource capacity to operate, maintain, and manage liquid waste treatment systems. • Promote recycling and safe re-use of liquid waste, including the prioritisation of greywater/sullage management.	• MSWR/MLGRD/ MMDAs/ Private Sector /Households

Priority actions for sanitation		
Key sub-sector challenges	**Priority actions to address challenges**	**Responsible agencies**
Service provision		
Inadequate Faecal Sludge Management (FSM)	• MMDAs should adopt the city-wide inclusive sanitation approach to ensure services for all. • MMDAs should prepare and implement comprehensive costed FSM master plans for urban centres, with financing mechanisms to ensure logical and equitable placement of infrastructure. • MMDAs should build capacity of private sector to provide quality and standard FSM services. • MMDAs should increase infrastructure investment for FSTPs through PPP financing arrangements. • MMDAs should provide guidance on management arrangements and O&M costs for FSTPs (high fees may deter use of FSTPs).	• MSWR/MLGRD/ MMDAs/ Private Sector
Lack of incentives/ enabling environment for private sector participation	• Improve the enabling environment and market incentives to attract the private sector to provide sanitation services. • Promote a 'circular economy' by connecting businesses to opportunities in the resource recovery market.	• MSWR/MMDAs/ Private Sector
Regulation		
Limited coverage of household toilets	• Strengthen enforcement of regulations requiring households to own and use private toilets at the MMDA level, including targeting landlords on sanitation provision for tenants. • Improve sensitisation and awareness on sanitation bylaws and the rights and responsibilities of tenants with access to household toilets.	• MMDAs/Private Sector/ Citizens
Public toilets dilapidated and dirty	• Contract out management and monitor services according to contract requirements (based on performance contracts). • Develop standard guidelines to assist MMDAs' work with public toilet operators and managers. • Discourage the installation of new public toilet facilities.	• MSWR/MLGRD/ MMDAs/ Private Sector/

Priority actions for sanitation		
Key sub-sector challenges	**Priority actions to address challenges**	**Responsible agencies**
Service provision		
Unsafe disposal of faecal sludge	• License and provide straightforward standard operating procedures for faecal sludge emptying services and publish a list of safe service providers. • Monitor faecal sludge emptiers and fine/punish those found to be illegally dumping waste.	• MMDAs/Private Sector/ Citizens
Poor sanitation services in low-income areas	• Monitor performance of service providers in delivering sanitation services, particularly to low-income areas.	• MMDAs/Private Sector/ Citizens
Limited capacity of MMDAs to regulate sanitation services	• NSA to ensure Environmental Health Departments/EHUs have adequate logistical capacity (vehicles/fuel) and skilled manpower for effective regulation of sanitation services and related activities. • NSA to sanction MMDAs for poor enforcement and regulation of service delivery.	• NSA/MMDAs
Finance		
Funding insufficient to meet targets	• The MoF should establish National Sanitation Fund (including ring-fenced sanitation and pollution levy on fuel) for investment in sanitation infrastructure, promotion, and legal enforcement. • Improve transparency, accountability, and efficiency in the expenditure of available limited financial resources. • Create enabling environment to encourage private sector investment in liquid sanitation services delivery. • Develop innovative financing mechanism and scale up investments in the sanitation sector (e.g., the introduction of ring-fenced sanitation funds from a surcharge on property rates as IGF at MMDAs to support sanitation). • Develop loan fund schemes for households that are interested and can afford to out a take loan to improve their toilet facilities (establish a national revolving fund scheme to leverage household financing). • Finance sanitation SMEs to set up toilet liquid waste management businesses. National revolving loan fund would support this.	• MoF/NSA/ MSWR/ MFIs/ Private sector/Landlords

Priority actions for sanitation		
Key sub-sector challenges	**Priority actions to address challenges**	**Responsible agencies**
Service provision		
Limited funding for research and development	• Commit funding to promote research and development of feasible technologies for improving liquid waste management. • Accelerate the establishment of the National Research Fund.	• MoF/NSA/MSWR/ MMDAs/ Academic & Research Institutions/ Private Sector
Monitoring and evaluation		
Inadequate/patchy information on sanitation	• Develop and harmonise sanitation indicators in the district data development plans. • Include data collection and monthly reporting in the job description of environmental health officers. • Institute mandatory use of MISs (e.g., BaSIS, etc.) by stakeholders, including NGOs.	• MSWR/NSA/ MMDAs/NGOs

5.2 Solid waste management (SWM)

Management of solid waste is a problem in most developing countries. Majority of developing countries faces major environmental challenges associated with waste generation and inadequate waste collection, transport, treatment, and disposal. This section of the programme provides the highlights regarding SWM. A separate assignment commissioned by MSWR will provide a detailed development programme on SWM in Ghana.

Ghana faces an SWM conundrum, due to challenges with solid waste collection and disposal. The factors contributing to the SWM challenges in Ghana are varied but the key ones include poor management practices, inadequate financial resources, and the absence of a policy and systems on source separation. Ghana's current waste management system focuses on the hauling of mixed waste to landfill sites without formal resource recovery. Waste generation in Ghana continues to increase, with a daily generation rate of about 12,710 tonnes per day and more than 4 million tonnes per annum, which stands to increase as the population increases. It is estimated that about 70–80% of solid waste generated in cities is collected. The rest ends up in drains or on roadsides or is either burned or buried. The collected waste, comprising recyclables, organics, and inert waste, is mostly dumped together in landfills, without recovery of valuable resources which otherwise could be recovered for economic gain in a plough-back venture, which could reduce the cost of managing the waste and improve the sanitation situation in the country.

5.2.1 Policy, legal, and regulatory framework

The policy, legal, and regulatory aspects of SWM are a part of the external environment within which the public institutions and private organisations operate. These legal and regulatory frameworks outline government's intentions, strategies, and course of action towards achieving sustainable waste management and disposal practices in Ghana. The main legal and guiding documents relevant to SWM are presented in Annex A.

5.2.2 Key actions to address the challenges identified

The SWM sub-sector faces a number of challenges, from service provision through to regulation, financing, and monitoring and evaluation. Table 25 presents the priority actions to address the key sub-sector challenges. It is expected that these priority actions will inform the development of key sector strategies for SWM under the separate assignment that will develop SWM aspects for the GWASHSDP.

Table 25: Priority actions to address key challenges in SWM

Priority actions for SWM		
Key sub-sector challenges	**Priority actions to address challenges**	**Responsible agencies**
Service provision		
Insufficient collection services, with large unserved population	Expand waste management services to all areas by: • Re-zone service delivery areas to include a mix of high and low-income areas. • Standardise procurement and contracting arrangements. • Strengthen public education on waste reduction, segregation/sorting, and recycle/re-use at the household level.	MMDAs
Polluter pays policy is not popular among all citizens	• Develop a comprehensive behaviour change campaign to sensitise customers on the importance of SWM and a cost recovery policy and polluter pays principle. • Strengthen overall SWM sub-sector governance, including enforcement of laws, to improve the quality of services.	MMDAs MSWR/MLGDRD

Priority actions for SWM		
Key sub-sector challenges	**Priority actions to address challenges**	**Responsible agencies**
Service provision		
Inadequate SWM planning and limited infrastructure for treatment and disposal	• Prepare comprehensive costed SWM master plans for MMDAs, with financing mechanisms to ensure logical and equitable placement of SWM infrastructure. • Ensure PPP decisions are transparent and based on robust analyses of cost recovery mechanisms and likely demand, in order to reduce risks to public investments. • DESSAPs should always connect to the SWM master plan prepared for MMDAs.	MSWR/MLGDRD MSWR/MLGDRD/ MMDAs MMDAs
Inadequate solid waste re-use/recycling systems	• Introduce publicly and privately owned waste processing sites to increase the prospects for recycling and the setting up of local buy-back centres. • Support the development of a recycler's exchange/forum for information on pricing, tax, and trade of recyclables. • Create enabling environment for small-scale business in the area of SWM. Provide loans at reasonable rates to establish such businesses.	MMDAs MMDAs
Gaps in human resource capacity	• Build specialised waste management capacity within MMDAs through the progressive expansion of Waste Management Departments and the roll-out of training programmes in specific technical areas, such as landfill management and supervision.	MSWR/MLGDRD/ MMDAs
Regulation		
Poor law enforcement and behaviour and attitudes towards safe disposal – indiscriminate dumping	• Develop an enforceable regulatory framework for the SWM sector which provide a basis for procurement, contracting, monitoring, and supervision of service providers working across the waste management chain. • Conduct studies to identify all bottlenecks to effective enforcement of bylaws for waste management at the assembly levels.	Attorney General/ MLGDRD/ MMDAs
Finance		

Priority actions for SWM		
Key sub-sector challenges	**Priority actions to address challenges**	**Responsible agencies**
Service provision		
Inadequate funding (inadequate fee collection, low fee rates, inability to raise funds, difficult access to credit, etc.)	• Develop a strategic financing strategy for mobilising funds from identified sources of funds (user fees, public finance, and private sector investment via PPPs).	MoF/MLGDRD
Monitoring and evaluation		
Inability to forecast the quantity of solid waste generated	• Integrate SWM indicators in a national waste MIS and develop a simple monitoring framework to track implementation. • Institutionalise a common set of service delivery indicators in MMDA-managed SWM contracts for service coverage, quality, accessibility, and reliability. • Improve data generation and collection systems through the running of a comprehensive MIS regime, with committed adequate resources for effective implementation.	MSWR/MLGDRD

5.3 Hygiene

Effective hygiene promotion at scale is key to improving behaviours, preventing diseases, maintaining health, and greatly improving the full benefits of water supply and sanitation programmes. While water and sanitation infrastructure provide the physical conditions for hygiene, improved hygiene behaviours help prevent the transmission of pathogens and diseases, and also benefit the treatment of existing medical conditions. Hygiene practices are critical ways of obtaining desired health outcomes from investments in WASH and related interventions, and also in education, nutrition, and preventive health programmes. The approach to hygiene under the GWASHSDP will focus on the following:

- Moving away from traditional educational approaches (focused on increasing knowledge) to more innovative and creative approaches for creating sustained behaviour change, targeting emotional drivers (nurture, disgust, affiliation, status, comfort, etc.), social marketing, and behavioural determinants and settings.
- Strategically targeting context-specific key hygiene behaviours to attain greater public health and programme effectiveness in national WASH programming.
- Moving from one-off 'projectized' hygiene promotion work to more comprehensive and collaborative hygiene promotion interventions at scale, embedded in the programme.
- Shifting away from ad hoc (add-on) resource allocation for hygiene work to sufficient and adequate allocation of long-

term resources (including financial and human resources) for hygiene promotion work.

- Strategically collaborating with other sectors (such as health, education, local government, etc.) and sector partners (such as academia, donors, NGOs, religious bodies, women's groups, civil society groups, etc.), in the national hygiene policy and strategy formulation processes, and implementation and monitoring, in order to ensure impactful outcomes and impact.

Hygiene will be seen as an essential and integral component to be embedded in WASH policy and advocacy, capacity building, monitoring and evaluation, and organisational management work (especially in EHSD's operations). Under this GWASHSDP, hygiene promotion approaches using community participation, social marketing, motivational factors (addressing emotional drives), and change in behavioural settings will be pursued. Although, all hygiene behaviour practices are important, the GWASHSDP prioritises the following five hygiene behaviours:

1. Handwashing with soap at critical moments, such as after defecation and cleaning a child's bottom, before eating and before feeding children, after touching dust/waste, and at other critical moments for different professional groups.
2. Safe and hygienic management/disposal of human excreta and cleanliness of sanitation facilities (no smell, no visible faeces and flies, availability of water and soap/cleaning agent near toilet).
3. Safe domestic water management from source to the point of consumption (collection, transportation, storage, household water treatment, and consumption).
4. Menstrual hygiene and its management in schools.
5. Other context-specific hygiene behaviours, such as face-washing, liquid and solid waste management (specific to hygiene), and cleanliness of household environments.

5.3.1 Handwashing with soap

Ghana does not generate administrative data on hygiene, instead relying on survey-based data. Hygiene measurement through handwashing is a standard component of MICS and Demographic Health Survey household surveys. These surveys capture relevant information regarding the place where members of the household most often wash their hands and record the type of facility used and the presence of water and soap. Handwashing facilities may be fixed, such as sinks with taps or buckets with taps or tippy-taps, or mobile, such as jugs or basins designated for handwashing. Soap includes bar soap, liquid soap, powdered soap (detergent), and soapy water, but does not include ash, soil, sand, or other handwashing agents. According to the MICS report (2017/18), only an estimated 48% of Ghanaians consistently wash their hands with soap. These people have access to handwashing facilities at home. The report further indicates that 24% of households have a designated place/device for handwashing, but without soap and water, while 48% have no facility at home for handwashing when they come into contact with dirt or germs. The MICS report shows inequalities in coverage of basic handwashing facilities, which range from just 42% in rural areas to 56% in urban areas.

According to the recent JMP report (WHO/UNICEF, 2021), the coverage of handwashing practices in rural areas is higher than in urban settings. The service levels (adapted from the SDGs) and the targets for the GWASHSDP are presented in Table 26. The target is that by 2025, with full commitment (resources, including financial), there will be 100% basic hygiene service – where every Ghanaian will be practising handwashing with soap, especially at critical times (Table 27). Meanwhile, an additional indicator is added to track the improved behaviour of the population on handwashing at critical times.

Table 26: Hygiene service levels and targets in the GWASHSDP

Category	Service level	2020 (baseline)*	2025 targets			2030 targets		
		Funding levels	Min	Med	Full	Min	Med	Full
Urban	Basic (handwashing facility with water and soap available)	35%	60%	74%	100%	85%	100%	100%
	Limited (without water or soap)	40%	30%	21%	0%	15%	0%	0%
	No service	25%	10%	5%	0%	0%	0%	0%
	Population washing hands with soap at any critical times**		50%	70%	90%	95%	100%	100%
Rural	Basic (handwashing facility with water and soap available)	47%	65%	75%	100%	85%	100%	100%
	Limited (without water or soap)	34%	25%	20%	0%	15%	0%	0%
	No service	19%	10%	5%	0%	0%	0%	0%
	Population washing hands with soap at critical times**		50%	60%	80%	90%	100%	100%

*WHO/UNICEF JMP Progress on Water, Sanitation and Hygiene 2000–20; **critical times = after defecation, before eating/touching, and before breastfeeding.

SDG target 6.2 includes an explicit reference to achieving 'equitable hygiene for all'. The GWASHSDP supports the SDG definitions and accepts that handwashing with soap and water must be a priority in all settings and recognises these as suitable indicators for national monitoring.

Table 27 shows the SDG service-level indicators and definitions adopted for the hygiene sub-sector in Ghana.

Table 27: SDG definitions for hygiene – handwashing with water and soap

Service Level	Definition
Basic	Availability of a handwashing facility on premises, with soap and water.
Limited	Availability of a handwashing facility on premises, without soap or water.
No facility	No handwashing facility on premises.

Policy, legal, and regulatory framework for handwashing

Hygiene behaviours, including handwashing behaviour, are guided by the National ESP 2010. This policy provides the framework for ensuring good hygiene behaviour and hygiene education through awareness creation and community sensitisation. The relevant policies, strategies, manuals, and guidelines for handwashing are presented in Annex A.

Priority actions to address handwashing with soap challenges

Table 28 below summarises the key challenges and the priority actions necessary to resolve them to promote effective handwashing with soap in the country. The table sets out the challenges and priority actions, together with the responsible sector agencies. The key strategies adopted to facilitate the execution of the priority actions are sustaining behaviour change and improved access to handwashing facilities (see the programme implementation plan provided as Annex B for details).

Table 28: Priority actions to address key challenges for handwashing with soap

Priority actions for handwashing with soap		
Key sub-sector challenges	**Priority actions to address challenges**	**Responsible agencies**
Service provision		
Difficult to change and sustain behaviour change	• Continuous promotion efforts, with feedback on the effectiveness of different approaches. • Use social marketing approach to design handwashing with soap campaigns for urban and rural areas. • Strengthen handwashing with soap in CLTS and sanitation marketing approaches to encourage rural households to construct and use handwashing facilities.	MMDAs/ GHS
Inadequate handwashing facilities for institutions	• Prioritise investment in handwashing facilities for public toilets, healthcare facilities, and other public spaces. • Introduce appropriate and adequate handwashing stations for schools for handwashing.	MMDAs/GHS/GES
Capacity gaps in handwashing promotion techniques	• Roll out tailored technical training on handwashing promotion to EHUs.	EHSD
Handwashing with soap systematically promoted in communities, in addition to schools	• Handwashing programmes and interventions in Ghana should include packages for communities and should not be limited to only schools.	MLGDRD/MSWR/ MMDAs

Priority actions for handwashing with soap		
Key sub-sector challenges	**Priority actions to address challenges**	**Responsible agencies**
Service provision		
Weak coordination among various actors including government, civil society organisations, and private sector	• MMDAs should lead efforts in hygiene promotion, including handwashing, and should coordinate efforts of all key players to ensure joint efforts towards meeting hygiene targets.	MMDAs/GES/GHS/civil society organisations
Regulation		
Lack of regulation on handwashing with soap	• Develop national strategy on hygiene for all. • Develop operational guideline for delivering hand hygiene for all in every setting (communities, schools, and all other settings). • MMDA EHUs should prioritise enforcement of the presidential directives and executive instruments on COVID-19, especially on handwashing. • MMDAs should mainstream handwashing in their bylaws, even beyond COVID-19. • Government should support the establishment of SMEs working on hygiene products, including lowering the tax and offering tax holidays.	GOG/MMDAs
Finance		
Inadequate and irregular funding and logistics at MMDA level to conduct field promotion efforts	• MMDAs should prioritise funding and logistics to support hygiene promotion and the sustaining of behaviour change.	MMDAs
Monitoring and evaluation		
Lack of accurate data/information on handwashing practices	• MMDAs should ensure monitoring and reporting on the performance of hygiene promotion and the sustaining of behaviour change.	MMDAs

5.3.2 Safe disposal of faeces

Safe faecal disposal simply means that households, homes, and communities are free from any form of contamination from faecal matter. Faecal contamination comes as a result of unsafe containment, especially due to the practising of open defecation instead of the use of toilet facilities. In Ghana, open defecation levels remain high, with baseline statistics around 17% (2020) (see Table 29 below). In terms of service levels, all households, homes, and communities should have ODF environments, including safe disposal of children's faeces, to ensure safe public health, and this is the target for 2030. Table 29 provides the level of service and targets for safe disposal of faeces in the medium and long term.

Table 29: Service levels and targets for safe disposal of faeces

Category	Service level	2020 (base-line)*	2025 targets			2030 targets		
		Funding levels	Min	Med	Full	Min	Med	Full
Urban	Open defecation practices among the populace (%)	7%	5%	2%	0%	0%	0%	0%
	Safe disposal of children's faeces (%)			70%	80%	100%	100%	100%
Rural	Open defecation practices among the populace (%)	32%	10%	5%	1%	0%	0%	0%
	Safe disposal of children's faeces (%)				80%	100%	100%	100%

* WHO/UNICEF JMP Progress on Water, Sanitation and Hygiene 2000–20.

Policy, legal, and regulatory framework for the safe disposal of faeces

The legal acts governing excreta disposal are the Public Health Act 851 (2012) and the Local Government Act 936 (2016). There are several policies and strategies that provide clear and nationally accepted principles and guidelines for safe excreta disposal and service delivery in Ghana. The key legislation, policies, strategies, manuals, and guidelines on safe disposal of faeces are shown in Annex A.

Key actions to address challenges identified

Key challenges that exist around safe excreta disposal range from inadequate regulations and lack of enforcement of bylaws, to finance, service provision, and monitoring and evaluation. Table 30 summarises the key challenges and necessary priority actions to resolve them to promote public health and safety. The key sector actors responsible for specific priority actions are also identified. The key strategy adopted to ensure the implementation of the priority actions is promoting safe toilet use and disposal of faeces (including excreta of children) (see the implementation plan in Annex B for details).

Table 30: Priority actions to address key challenges for safe disposal of faeces

Priority actions for safe disposal of faeces		
Key sub-sector challenges	**Priority actions to address challenges**	**Responsible agencies**
Service provision		
Difficult to change and sustain behaviour change	• Identify mechanisms for sustaining sensitisation and awareness creation, including faith-based organisations and traditional authorities. • Intensify efforts to create public interest in the benefits and costs of unsafe disposal of children's faeces. • Promote effective enforcement of sanitation laws on safe disposal of faeces.	MMDAs
Regulation		
Regulation of open defecation not systematic	• Establish a regulatory framework for effective enforcement of sanitation laws on safe disposal of faeces. • Open defection is largely practised by the poor; have a targeted approach to support poor households to access latrines.	Attorney General/ MLGDRD/MMDAs
Finance		
Sanitation facilities are expensive for low-income population	• Implement targeted household subsidy programmes for the poor and for vulnerable groups (e.g., GAMA Project, Government of Ghana–UNICEF Urban and Rural Project).	MoF/MLGDRD/MSWR
Monitoring and evaluation		
Lack of accurate data/ information on safe disposal of faeces	• MMDAs should ensure monitoring and reporting on the performance of service providers in regard to promoting safe disposal of faeces.	MMDAs

5.3.3 Household water treatment and safe storage (HWTS)

HWTS is the final step in ensuring access to safe water at the point of use. This aspect of hygiene involves safe water storage and handling practices, including safe water withdrawals and availability of treatment options/practices at the point of use. Table 31 shows the service levels and targets for HWTS in the medium to long term.

Table 31: Service levels and targets for HWTS

Service level	2020 (baseline)*	2025 targets			2030 targets		
	Funding levels	Min	Med	Full	Min	Med	Full
Safe water storage and handling at home	No available data						100%
Safe household water treatment practices	No available data						100%

Level of household water treatment and storage service

A description of the levels of service for HWTS is presented in Table 32 below.

Table 32: HWTS service levels description

Level of service	Description
Safe water storage and handling	Using a clean container with a cover and separate dispenser (cup/dipper or tap unit) with handle or jerrycan with cap/tap.
Safe household water treatment practices	Safeguard or similar for households with no access to improved water sources and supply.

Policy, legal, and regulatory framework for HWTS

The main documents driving safe HWTS are the sector strategies: the WSSDP 2010, the National Strategy for Household Water Treatment and Safe Storage 2014, and the National Drinking Water Quality Management Framework 2015. Details of the key policies, strategies, manuals, and guidelines for HWTS in Ghana are given in Annex A.

Institutional arrangements

The MMDAs are responsible for promoting HWTS through the EHOs and EHAs. The existing practices involve key sector actors, like NGOs, CWSA, MMDAs, the private sector, and others, undertaking promotion for, and piloting and testing, some technologies, through project-based interventions. HWTS should be prioritised and well-integrated into the core components of WASH service delivery.

Key actions to address challenges identified with HWTS

Several challenges exist with HWTS. Table 33 below summarises the key challenges and the suggested priority actions necessary to promote HWTS in Ghana. The key strategy adopted to facilitate the execution of the priority actions is scaling up safe HWTS (see

Annex B for implementation plan details). The implementation plan should cover technologies, including the five main household water treatment options that are normally available: (1) chlorination (adding chorine in liquid or tablet form to drinking water); (2) flocculation/ disinfection (adding powder or a tablet to coagulate and flocculate sediment in water, followed by a timed release of disinfectant); (3) filtration; (4) solar disinfection (exposing water in clear plastic bottles to sunlight for a day); and (5) boiling.

Table 33: Priority actions to address key challenges for HWTS

Priority actions for HWTS		
Key sub-sector challenges	**Priority actions to address challenges**	**Responsible agencies**
Service provision		
Difficult to scale up	• Concentrate programming and implementation efforts in locations where households are using an unimproved water supply. • Create awareness of the roles and responsibilities of households in the HWTS value chain. • Training and institutional capacity building and the development of behaviour change communication strategies, materials, and products.	MMDAs/MSWR
Regulation		
Inadequate regulatory framework to regulate the HWTS value chain	• Provision of a regulatory framework that outlines roles and responsibilities for HWTS interventions/activities in Ghana. • National HWTS should be mainstreamed in new/revised policies like the ESP, NWP, Health Policy, and others relevant to the sector.	MSWR MSWR
Lack of effective regulation of sachet water quality, although this option competes with HWTS technologies	• Regulators must improve the regulation of sachet water quality while taking advantage of increased awareness of safe drinking water (created by sachet water vendors) to push for the adoption of appropriate and affordable HWTS for households in need.	MMDAs/FDA
Finance		

Priority actions for HWTS		
Key sub-sector challenges	**Priority actions to address challenges**	**Responsible agencies**
Service provision		
Inadequate resource mobilisation to finance national HWTS programmes	• Develop short-, medium-, and long-term innovative resource mobilisation strategies and plans for the implementation of national HWTS programmes. • Provide incentives for private sector participation in the value chain, in the area of service delivery (supply side).	MSWR/MMDAs
Monitoring and evaluation		
Inadequate monitoring and evaluation systems with appropriate indicators for HWTS reporting	• Review existing monitoring and evaluation platforms in the WASH sector to enhance comprehensive reporting on HWTS: for example, integrating HWTS into DiMES, Materials in transition Environmental Sanitation Assessment and Audit, BaSIS, Expanded Sanitary Inspections Compliance Application.	MSWR/MMDAs/GHS

5.3.4 Menstrual hygiene management

The issue of menstrual hygiene is inadequately acknowledged and efforts to address the gaps in this area have been unsatisfactory, especially in relation to young girls. Hygienic menstrual practices, such as the use of sanitary pads, are crucial during menstruation. The lack of appropriate menstrual hygiene facilities (waste disposal points, water and soap, mirrors, and emergency sanitary pads), especially for schoolgirls and those out of school, makes girls and women vulnerable to emotional and physical challenges during their menstrual days. About one in every five of the women in Ghana feel excluded from social activities during menstruation.

There are no indicators for either community- or school-level MHM. The major responsibility is placed on the MMDAs, and especially their Environmental Health and Sanitation Departments/EHUs, to do more in their communities. Moreover, MHM in Ghana is comparatively more a school-based intervention, as part of WinS. For more details in this area, including the policy and legal framework, refer to Chapter 6 on WinS. Institutional arrangements for MHM, and some key priority actions for general MHM, are discussed below.

Institutional arrangements for general MHM

The key institutions that should be responsible for MHM as part of WASH services delivery include MSWR (EHSD/PPBME), MLGDRD (MMDAs/RCCs), CWSA, MoE/GES/School Health Education Programme (SHEP), and key sector stakeholders like development partners (UNICEF, World Bank, etc.), NGOs, civil society organisations, the private sector, and others. Table 34 presents details of the major roles of relevant actors.

[20] MoE (2021) 'Policy Brief on MHM delivered on Menstrual Hygiene Day 28 May 2021'.

Table 34: Description of institutions and their roles and responsibilities for MHM

Institution	Roles and responsibilities
Ghana central government	Allocates funds through the national budget to sector ministries and agencies for hygiene (including MHM) promotion as an integral component of WASH service delivery.
NDPC	Regulates the decentralised planning system, and monitors, evaluates, and reports on WASH as one of the priority interventions within the government's MTDP.
MSWR-EHSD	• MSWR has responsibility for policy formulation, harmonisation, and coordination of sanitation activities, through its EHSD.
MLGDRD	• Responsible for the coordination and formulation of environmental sanitation policy and technical guidelines, including monitoring and evaluation. • Facilitates funds mobilisation for solid waste services provision at the MMDAs.
NSA	• The NSA has the regulatory function of setting national standards for sanitation and managing the National Sanitation Fund.
GES/SHEP	• Through SHEP (in collaboration with the National Technical Committee on MHM – namely MMDAs, development partners, and civil society), GES designs school WASH policy, strategies, and action plans. • Collaborate with stakeholders to mobilise resources for school WASH infrastructure and coordinate with MMDAs to monitor implementation. • Guide and support schools in mobilising funds for WASH O&M. • Set standards and policy guidelines in education facilities.
RCCs	• RCCs are responsible for coordinating, monitoring, and evaluating the performance of DAs and monitoring the use of all funds allocated to DAs by any central government agency. They also serve as the arbiter of inter-district disputes, but they hold little regulatory leverage.
MMDAs (Waste Management Department/EHU)	• The MMDAs play a lead role in making resources available to support hygiene education and promotional programmes at the local level. The EHUs within the assemblies collaborate with public health nurses (Ghana Health Service), to ensure effective MHM practices (including the use of appropriate materials) during home visits.
NGOs	• Provide hygiene (MHM) infrastructure as part of WASH services delivery at the local level.
Private sector	• Responsible for WASH service provision at the local level. • Additionally, the private sector is encouraged to support the sale of quality but affordable hygiene products and services to facilitate the provision of services to beneficiaries.
Water and Sanitation Management Teams	• Sensitise women in communities on good MHM practices.
Beneficiary communities	• Payment of user or service delivery charges to service providers. • Complaints and demand for quality services.

Key actions to address the challenges identified

MHM practices vary significantly based on culture, wealth, education, water and sanitation access, and product availability. Table 35 presents the key challenges associated with general MHM and the priority actions needed to address them. Also, key sector agencies responsible for some of these priority actions have been identified, to facilitate the implementation of the strategies needed to produce good results. A key strategy identified for effective MHM is sustaining improved MHM at all levels, including young girls in and out of school (see Annex B for the programme implementation plan).

Table 35: Priority actions to address key challenges for MHM

Priority actions for MHM		
Key sub-sector challenges	**Priority actions to address challenges**	**Responsible agencies**
Service provision		
Sanitation facilities, including those in public places, do not meet MHM needs	• Ensure gender, disability and MHM -friendly sanitation infrastructure in schools, healthcare facilities, offices, and other public spaces and/or public toilets are complied with and supervised. • Operationalise national MHM guidelines by creating awareness and publication of documents. • Each school to develop and/ or implement their school WASH O&M plan to ensure that toilets are able to remain functional and continue to provide MHM services.	MMDAs/MWH/GES/GHS
Majority of girls do not have accurate information on menstruation before their first period	• Improve communication strategies (education and sensitisation) to address negative socio-cultural norms, rules, values, and stigmatisation associated with MHM in community and school settings. • Improve school curricula beyond the biological aspects of menstruation to cover knowledge and skills relating to MHM. • Institute MHM counselling in school and community settings, especially for young girls with psychosocial trauma, period-led iron deficiency anaemia, and other related consequences.	MMDAs/MWH/GES/GHS
Most girls between the ages of 15 and 19 feel excluded from school, social, and home activities during their period		GES/MMDAs

Priority actions for MHM		
Key sub-sector challenges	**Priority actions to address challenges**	**Responsible agencies**
Service provision		
Regulation		
No clear regulatory framework for MHM in Ghana, including school and community settings **Inadequate regulation against taboos, and negative traditional rules, values, and norms in the country**	• Develop a defined regulatory framework for improved accountability for MHM and service delivery in Ghana, especially for low-income community and school settings. • Operationalise regulatory mechanisms that restrict and abolish negative traditional norms, rules, and values, including stigmatisation. • MHM-related violence and abuse should be well defined as part of sexual and gender-based violence handled by the Domestic Violence Support Unit of the Ghana Police Services.	MSWR/GES/MMDAs
Finance		
High cost of sanitary pads driven by 20% import tax limiting access and increasing vulnerability, especially among young girls from poor homes	• Government should increase investments in school WASH infrastructure that supports effective MHM. • Operationalise the commitment to remove import duties on sanitary pads to increase affordability and to move towards ending menstrual period poverty. • Support local private sector ventures producing sanitary pads in Ghana to meet the needs of the poor and vulnerable.	MoF/GES
Insufficient financing to maintain functional sanitation and water facilities for improved MHM	• Prioritise and commit funds for effective O&M of WASH facilities to support MHM in schools.	MoF/GES

Priority actions for MHM		
Key sub-sector challenges	**Priority actions to address challenges**	**Responsible agencies**
Service provision		
Monitoring and evaluation		
Inadequate disaggregated data on MHM in schools and public places of convenience	• Improve monitoring data and reporting on MHM-compliant sanitation facilities in schools and public places markets, bus terminals, recreational centres, etc. • EMISs should capture and report on stocks of emergency MHM materials for girls in school. • Synchronise and/or ensure collaboration between MoE's nine EMISs and GSS's MICS data collection systems on menstrual hygiene.	MSWR/GES/MMDAs

POLYTANK
ACCIDENT AND EMERGENCY CENTER
Clean Community Campaign-
Hygiene for COVID-19
Foot Operated Hand
Washing Facility

8,00 Ltrs

6. WASH in institutions and cross-cutting issues

Access to institutions with safely managed WASH facilities for all in all settings is essential to achieve the SDGs, and to ensure the well-being and dignity of all people. Similarly, in humanitarian crises or emergencies, communities need access to safely managed WASH services. Effective WASH interventions can reduce the spread of diseases, and suffering, and ultimately can protect public and environmental health. This chapter of the GWASHSDP therefore covers WASH in institutions (WASH in offices, WASH in School (WinS), WASH in healthcare facilities, WASH in prisons), WASH in other public spaces (such as markets and lorry parks, where MMDAs must ensure WASH availability and a required level of service to meet public health and safety needs), WASH in emergencies, and cross-cutting issues in WASH (equity and inclusion, gender, and climate change).

Low WASH coverage is often attributed to low priority-setting among national and local governments. To provide strategic direction for the WASH sector, focusing on its priorities, the GWASHSDP sets out interventions for the identified key challenges in institutions and emergencies (among others).

In order to prioritise investment to ensure the sustainability of WASH interventions, the core themes considered are categorised under service provision, regulation, finance, and monitoring and evaluation.

6.1 WASH in schools (WinS)

School children deserve a healthy learning environment with easy access to safely managed WASH services. Learning, hygiene, and health are strongly interlinked as lack of access to safely managed WASH facilities can affect the attendance and educational achievement of school children. As such, every child-friendly school requires appropriate WASH initiatives that keep the school environment clean and free of smells, and that inhibit the transmission of harmful bacteria, viruses, and parasites.

Under the Education Sector MTDP 2018–21, SHEP within GES oversees the coordination of policies on health and WASH promotions in schools. Up to now, WinS has been delivered as part of traditional WASH promotion projects in communities.

6.1.1 Policy, legal, and regulatory framework

The SHEP Policy and Strategy framework, and other legal and regulatory frameworks, offer the general direction for school health programming and provide a good context for WinS programming. The legal, policy, and regulatory frameworks for WinS, including MHM, are discussed in Annex A. There are no significant challenges relating to the policies and regulatory components.

6.1.2 Institutional arrangements

Institutional arrangements for WinS extend from the national and sub-national level, down to the school level. At the national level, there are four key ministries involved in WinS: MoE, MoF, MLGDRD, and MSWR. MoE is designated as the overall coordinator responsible for WinS, with GES leading the implementation of WASH services in schools. Other MDAs are expected to support and implement WinS strategies in a collaborative manner. For instance, MLGDRD and MSWR have joint responsibility for ensuring that existing national policies, strategies, and frameworks support improved WASH conditions in schools. Beyond the national-level institutions, other sub-national institutions –

such as CWSA, Regional Environmental Health and Sanitation Departments, MMDAs, SHEP, and NGOs – coordinate with GES to advocate, raise awareness, and facilitate the provision of environmental-, gender-, child-, and disability-friendly WASH facilities in schools.

6.1.3 Service levels and targets for WASH in schools

Safe and child-friendly water, sanitation and hygiene (WASH) in schools improves health, boosts education achievement, promotes gender equity and has a positive impact on communities[21]. The hygiene component includes handwashing with soap and menstrual hygiene (MHM). In Ghana, it is reported that about 2 out of every 3 schools are without any WASH facilities especially for water, sanitation and urinal where there is some level of data available (but not well disaggregated)[20]. Data on MHM indicators/service levels – including school MHM sanitation facilities and the availability of emergency MHM materials for girls in school (as described in Table 36 below) – are not available. In this GWASHSDP,

Effective MHM practices are being integrated into national norms, standards, and guidelines related to WinS, to emphasise the importance of MHM. Also, the SDG core indicators for tracking basic water, sanitation and hygiene in schools as defined by WHO/UNICEF Joint Monitoring Programme for Water Supply and Sanitation (JMP)[22] are also presented (see Table 36).

Table 36: Levels of service and targets for WASH in schools

Service level	2020 (baseline)*	2025 targets			2030 targets		
	Funding levels	Min	Med	Full	Min	Med	Full
Proportion of schools with basic drinking water	32.2%	40%	45%	50%	80%	95%	100%
Proportion of schools with single-sex basic sanitation	Not disaggregated (27.9%)	30%	35%	40%	80%	95%	100%
Proportion of schools with basic handwashing	No available data				80%	95%	100%
School MHM sanitation facilities	No available data				80%	90%	100%
MHM practice in schools	No available data				80%	90%	100%
Availability of emergency MHM materials for girls in school	No available data				80%	90%	100%

6.1.4 Levels of service

There are no formal defined service levels and indicators for MHM; however, effective MHM may be achieved if the three key service conditions described in Table 37 below are fulfilled.

[20] Ghana WASH Sector Performance Report (2018/2019)
[22] https://www.who.int/water_sanitation_health/monitoring/coverage/wins-core-indicators-and-questions-4-pager.pdf

Table 37: Service levels and indicator proxies for MHM in schools

Level of service	Description
Proportion of schools with basic drinking water	Proportion of schools (including pre-primary, primary and secondary) with drinking water from an improved source available at the school.
Proportion of schools with single-sex basic sanitation	Proportion of schools (including pre-primary, primary and secondary) with improved sanitation facilities at the school, which are single-sex and usable.
Proportion of schools with basic handwashing	Proportion of schools (including pre-primary, primary and secondary) with handwashing facilities, which have soap and water available.
School MHM sanitation facility	A separate female toilet with privacy, water, and soap, as well as a point to dispose of used pads, etc., is available.
MHM practice in schools	All female students practise effective MHM
Availability of emergency MHM materials for girls in school	Schools always have MHM materials (like sanitary pads) readily available to support school girls in emergencies.

6.1.5 Priority actions for WinS challenges

Although some successes have been achieved across schools in the country in regard to implementing effective WinS in schools, critical gaps still remain. Table 38 shows the key challenges identified for WinS, and the needed actions to address the challenges. These priority actions should be considered in addition to those already presented on general MHM in Section 5.

Table 38: Key actions to address challenges identified in the WinS sub-sector

Priority actions for WinS		
Key sub-sector challenges	**Priority actions to address challenges**	**Responsible agencies**
Service provision		
Poor functionality of school water supply systems	• In consultation with schools and MoE, develop mechanisms for experience-sharing to provide guidance and standards on school water supply for different contexts. • Strengthen school management committees (SMCs) on additional tasks relating to O&M for school water supply systems. • Rationalise water tariff for schools based on life support principles (only charge the actual cost of water).	MMDAs/GES

Priority actions for WinS		
Key sub-sector challenges	**Priority actions to address challenges**	**Responsible agencies**
Service provision		
Many schools still rely on water sources located outside the school grounds	• Prioritise investment in school water supply. • Consider alternate sources of water, such as rainwater harvesting, if feasible.	MMDAs/GES
Vandalism to school WASH facilities by neighbouring communities	• Make sure that guidance to ensure investments in school sanitation include security and is not shared with communities. • Ensure that the communities around schools also have access to water, thereby preventing them from accessing schools' water.	MMDAs/GES
Inappropriate sanitation facilities that do not suit the context	• Provide guidance documents on WASH technology for schools and common challenges for various technologies.	MMDAs/GES
Inadequate sanitation facilities in many schools	• Increase funding support for school sanitation for those without access to infrastructure and services. • Set aside a budget for capital investment in GHS for WinS.	MMDAs/GES
Gender- and disability-friendly toilets not always available	• Ensure guidelines for gender- and disability-friendly toilets are well publicised and disseminated especially at the implementation levels (MMDAs/Schools).	MMDAs/GES/ SMCs
Handwashing practice not sufficient in many schools	• Improve promotion efforts and increase investment in handwashing facilities.	MMDAs/GES
Lack of emergency MHM materials (like pads and others) for girls in schools	• Schools should have stocks of MHM materials like sanitary pads for emergency menstrual discharge events among girls during school sessions.	MMDAs/GES
Regulation		
No specific regulations to compel facilities' design and provision to be MHM-compliant	• MoE/GES, together with MSWR/MLGDRD/MoH, need to come out with regulations regarding making all institutional WASH facilities MHM-compliant. • WASH should be considered as an integral part of school's infrastructure; no school should be built without WASH facilities.	MoE/MSWR/ MLGDRD/ MoH

Priority actions for WinS		
Key sub-sector challenges	**Priority actions to address challenges**	**Responsible agencies**
Service provision		
Finance		
Inadequate funding for O&M of WASH facilities	• GES/MMDAs should prioritise O&M financing for institutional WASH facilities within their districts. • Part of school capitation grant should be committed to support O&M activities for WinS facilities. • SMCs, with parent–teacher associations, community-based organisations, and community leaders, should support the financing O&M of WASH facilities.	MMDAs/GES/ SMCs/ Communities
Inadequate funds available to cover WASH	• MoE should increase funding for essential services through its capitation grants. • Engage utilities to charge schools a reduced water tariff and also help schools connect to utilities at no cost.	MoE/CWSA/ GWCL/ SMCs
Inadequate collaboration among stakeholders for effective O&M arrangements	• Clarify institutionalised roles and responsibilities and strengthen collaboration in supporting O&M activities on WASH facilities in schools.	MoE/MLGDRD/ MMDAs/ GES
Monitoring and evaluation		
Lack of data on MHM	• EMIS of GES should improve the indicators on MHM – facilities, emergency materials provision, gender-separated sanitation facilities, handwashing with soap etc. – and adequately report same • EMIS should connect to the larger sector and national MIS, e.g., synchronising GES's EMIS and GSS MICS data collection systems on menstrual hygiene.	MSWR/MoE/ GES/ MMDAs/ CWSA

6.2 WASH in healthcare facilities

Safe WASH in healthcare facilities is essential in order to provide safe people-centred health services and to maintain people's dignity. WASH in healthcare facilities involves providing WASH infrastructure and services to all parts of the facility. Healthcare facilities are formally recognised facilities that provide healthcare, including primary (health posts and clinics), secondary, and tertiary (district or national hospitals), public and private (including faith-run), and temporary structures designed for emergency contexts (e.g., cholera treatment centres), and these may be located in urban or rural areas.

6.2.1 Policy, legal, and regulatory framework

Strengthening the policy, legal, and regulatory framework on WASH in healthcare facilities is critical for effective health service delivery. This framework can support government and other sector stakeholders to accelerate the provision of efficient and quality services efficiently at scale. The legal, policy, and regulatory framework for WASH in healthcare facilities is summarised in Annex A.

6.2.2 Institutional arrangements

Institutional arrangements ensure that the roles and responsibilities of key institutions at the national and sub-national levels are clearly defined and maximise WASH services in healthcare facilities. The key institutions at the policy level are the GHS Council, the Traditional Medicine Practice Council, MoH and its agencies (like GHS), the Health Facilities Regulatory Agency (HeFRA), private and mission health associations, MoF, MSWR, and MLGDRD. The relevant sub-national actors include the regional health committees, regional health services, metropolitan, municipal, and district health services, RCCs, MMDAs (with EHUs/Environmental Health and Sanitation Departments), health facilities (public and private), including Community-Based Health Planning and Services (CHPS) compound), and traditional medicine and health facilities.

Service levels and targets for WASH in healthcare facilities

The existence of a set of coherent service levels for WASH in healthcare facilities facilitates the implementation of interventions. These service levels act as performance indicators that help to track the progress for achieving the set targets. Table 39 shows there is no baselines information on MHM service levels but targets for WASH in healthcare facilities by 2030. In addition, Table 40 presents a description of the levels of service as used in Table 39.

Table 39: Levels of service and targets for WASH in healthcare facilities

Service level	2020 (baseline)*	2025 targets			2030 targets		
	Funding levels	Min	Med	Full	Min	Med	Full
Safe water supply, at least basic service level	No available data				90%	95%	100%
Safe sanitation, at least basic service	No available data				90%	95%	100%
Handwashing with soap	No available data				90%	95%	100%

Based on UNICEF/WHO, 'Global SDG baseline for WASH in healthcare facilities'

Table 40: Description of levels of service

Level of service	Description
Safe water supply	Healthcare facilities have at least a basic (improved) water supply for all parts/components/departments.
Safe sanitation	Healthcare facilities have at least basic (improved) sanitation/toilet facilities that are decent enough for all parts/components/departments.
Handwashing with soap	Healthcare facilities have at least a basic (improved) handwashing facility, with reliable water supply and soap available, for use in all parts/components/departments.

6.2.3 Priority actions to address identified WASH in healthcare challenges

Access to WASH services in healthcare facilities is critical to ensure the provision of quality care. Inadequate WASH services, or the absence of such services, may lead to the spread of infections. There exist key challenges that hinder access to safely managed WASH services in healthcare facilities, thereby compromising the ability to provide safe care and prevent serious health risks for those seeking treatment. Table 41 presents key challenges associated with healthcare facilities, and the priority actions needed to address them.

Table 41: Priority actions for key challenges associated with WASH in healthcare facilities

Priority actions for WASH in healthcare facilities (HFCs)		
Key sub-sector challenges	**Priority actions to address challenges**	**Responsible agencies**
Service provision		
Insufficient quantity of water, and poor water quality	• MMDAs/GHS should ensure increased access to WASH facilities for all. • MMDAs/GHS should ensure the availability of safe water for patients, visitors, and caregivers.	MMDAs/ GHS/HFCs
Inadequate and insufficient sanitation and handwashing facilities in healthcare facilities	• MMDAs/GHS should ensure the availability of WASH facilities for workers, patients, visitors, and caregivers.	MMDAs/ GHS/HFCs

[23] UNICEF/WHO, www.who.int/docs/default-source/wash-documents/wash-in-hcf/global-sdg-baseline-for-wash-in-health-care-facilities-questions-and-answers.pdf?sfvrsn=69d0d54a_6

[24] UNICEF/WHO, www.who.int/docs/default-source/wash-documents/wash-in-hcf/global-sdg-baseline-for-wash-in-health-care-facilities-questions-and-answers.pdf?sfvrsn=69d0d54a_6

Priority actions for WASH in healthcare facilities (HFCs)		
Key sub-sector challenges	**Priority actions to address challenges**	**Responsible agencies**
Regulation		
Inadequate clarity on regulatory framework for WASH services in healthcare facilities	• Ensure explicit regulatory requirements and accountability mechanisms for WASH in healthcare facilities.	MoH/GHS/ HeFRA/ MMDAs
Finance		
Inadequate financial commitment, plans, and budget lines for WASH facilities and services **Inadequate mechanisms to track expenditures for WASH in healthcare facilities disaggregated for urban and rural sub-sectors**	• Prioritise financial commitments to WASH infrastructure and services in healthcare institutions. • Ensure effective tracking of disaggregated WASH expenditures for healthcare facilities in rural and urban areas.	MoF/MoH/ GHS/HCFs
Inadequate collaboration among stakeholders/ institutions for effective O&M	• Provide institutionalised collaborative support for O&M for WASH facilities in healthcare institutions, especially among MoH/GHS, and MMDAs/MLGDRD, with support from MSWR.	MSWR/MoH/ GHS/ HeFRA/ MMDAs/HCFs
Monitoring and evaluation		

Priority actions for WASH in healthcare facilities (HFCs)		
Key sub-sector challenges	**Priority actions to address challenges**	**Responsible agencies**
Inadequate data on WASH in healthcare facilities to inform policies, which are not translated into action plans **Inadequate inspections and enforcement mechanisms to ensure effective WASH facilities and services**	• MMDAs/GHS should monitor and report access to and functionality of WASH in healthcare facilities at all levels (national to local). • Strengthen capacity of local-level regulators and inspectorates (like MMDAs) to carry out their roles and responsibilities.	MSWR/MoF/GHS/ HeFRA/MDHDs MMDAs

6.3 WASH in emergencies

WASH in emergencies refers to providing WASH infrastructure and services to everyone affected by crises, including natural disasters, armed conflicts, and other fragile contexts. Emergencies, such as floods and droughts, have affected almost a third of the world's population. Those affected by such emergencies often suffer from unsanitary living conditions like a lack of safely managed sanitation and drinking water. In emergency settings, people often leave their homes in search of safer surroundings, and these new surroundings may have inadequate WASH services. The main aim of WASH in emergencies is to prevent the outbreak of public health emergencies due to water and sanitation-related diseases.

In Ghana, there are key challenges that need to be addressed to ensure that the survival needs of people can be met as quickly as possible. Table 42 presents priority actions to address the identified challenges for WASH in emergencies.

Table 42: Priority actions to address identified challenges for WASH in emergencies

Priority actions for WASH in emergencies		
Key sub-sector challenges	**Priority actions to address challenges**	**Responsible agencies**
Service provision		
Lack of resilient WASH programmes	• Build resilience through mainstreaming risk-based WASH programming that is anchored in all sector policy and strategies.	WRC/MSWR/ MLGDRD/ MMDAs/GWCL/CWSA
Weak capacity of institutions in emergency WASH	• Carry out strategic capacity building through curricula development and partnerships with learning and research institutions in Ghana.	WRC/MSWR/ MLGDRD/ MMDAs/GWCL/CWSA
Regulation		
Weak regulatory capacity on equitable and inclusive WASH	• MSWR and MMDAs should develop frameworks to influence sector actors' capacities to be more responsive to, and accountable for, the needs and rights of the poor.	WRC/MSWR/ MMDAs
Finance		
Inadequate financial resources for WASH in emergencies	• Increase financing for WASH in emergencies through innovative financing mechanisms. • Budget for preparedness and response, including pre-positioning of key stocks for effective and efficient WASH service delivery during emergencies.	MoF/WRC/MSWR/ MMDAs/GWCL/CWSA
Weak institutional framework for WASH interventions in emergencies	• Strengthen the institutional framework for WASH interventions in emergencies through deliberate mainstreaming/recognition in institutional mandates and job descriptions of key staff.	WRC/MSWR/ MLGDRD/ MMDAs/GWCL/CWSA
Monitoring and evaluation		
Lack of monitoring and evaluation system for early information and warning systems	• Enhance early warning and information systems that are integrated with WASH MISs.	WRC/MSWR/MLGDRD
Lack of coordination at the sub-national level	• Strengthen the institutional framework through deliberate mainstreaming/recognition in institutional mandates and job descriptions of key staff for WASH interventions in emergencies.	MMDAs/GWCL/CWSA

6.4 Equity and inclusion

Equity is the principle of fairness; in the context of WASH, it involves recognising that people are different and may need different support and resources to ensure their rights to safe water and sanitation are realised. To ensure fairness, measures must often be taken to compensate for specific discrimination and disadvantages faced in service provision. This means looking at relative disparities in WASH services at all levels, including regional, geographic, rural and urban, gender, and wealth quantiles, and understanding exactly what barriers are faced by disadvantaged people in accessing WASH services, and developing ways to overcome these barriers.

Inclusion is not just about improving access to services for those who are currently excluded, it is also about supporting marginalised people to engage in broader processes of decision-making to ensure that their rights and needs are recognised. To ensure that social inclusion is properly addressed, programmes need to be designed, implemented, and monitored to enhance the understanding of who does and who does not have access to WASH services, who uses and benefits from WASH programmes, and the impact of these programmes on substantive equality and inclusion.

Exclusion from, and inequitable access to, WASH services and opportunities are of major concern to the government and allied institutions, who are committed to improving relevant systems. Some of the key causes of exclusion from, and inequitable access to, WASH services, and the priority actions to address the identified challenges, are presented in Table 43 below.

Table 43: Priority actions to address identified challenges for equity and inclusion

Priority actions for equity and inclusion		
Key sub-sector challenges	**Priority actions to address challenges**	**Responsible agencies**
Service provision		
Wide spatial inequity between regions for rural water supply services	• Prioritise infrastructure investments in regions with the lowest access to rural water supply.	MSWR/MLGDRD/ CWSA
Wide spatial inequity between regions for rural sanitation services	• Prioritise sanitation promotion and investments in regions with the lowest sanitation access.	MSWR/MLGDRD/ CWSA
Limited access to urban water supply for the poor and vulnerable	• Improve strategies to reach the poor and vulnerable, including lifeline tariff adjustments for shared connections, subsidies, water connections for credit-worthy households, etc.	MSWR/MLGDRD/ GWCL

Priority actions for equity and inclusion		
Key sub-sector challenges	**Priority actions to address challenges**	**Responsible agencies**
Service provision		
Many public sanitation services are not designed to cater for disabilities	• Standardise the design of public toilets and ensure physical disabilities and gender specific factors are catered for. • Create awareness of, and focus on, equitable and inclusive WASH.	MMDAs
WASH targets steer stakeholders away from equity and inclusion	• WASH interventions should focus on the poorest and marginalised, who are often hard to reach.	MSWR/MMDAs
Regulation		
Weak regulatory capacity on equitable and inclusive WASH	• MSWR and MMDAs should develop frameworks to influence sector actors' capacities to be more responsive to, and accountable for, the needs and rights of the poor.	MSWR/MMDAs
Finance		
Inadequate financial resources for equitable and inclusive WASH	• Increase financing for equity and inclusion through innovative financing mechanisms.	MoF/MSWR/ MMDAs
Monitoring and evaluation		
Lack of a monitoring and evaluation system to track the progress of equity and inclusion in WASH	• Integrate equity and inclusion in monitoring and evaluation frameworks. • Support a consistent tracking and accountability system with specific equity and inclusion performance indicators in monitoring and evaluation indicators. • WASH monitoring targets and indicators should include disaggregated data on equity and inclusion. • Promote capacity building in equity and inclusion in WASH at national and sub-national levels.	MSWR/MLGDRD

6.5 Gender

Under the GWASHSDP, the WASH sector in Ghana will promote gender-responsive programming based on the existing national Gender Action Plan, which reflects an integrated approach to preventing and avoiding gender-based violence and exclusion from the planning, implementation, and management of WASH facilities and services at all levels. The programme aims to ensure the design and promotion of appropriate technologies to meet the needs of all sexes (e.g., the inclusion of MHM in WinS), and to ensure women's participation in WASH planning, implementation, monitoring, and reporting. Sector reports at all levels should disaggregate data on gender.

Equitable and universal access to WASH cannot be achieved without having in place specific gender equality measures in policy and programming. Table 44 outlines the key challenges related to gender in sustainable WASH, and the priority actions that need to be taken to address these challenges.

Table 44: Priority actions for challenges associated with gender in WASH

Priority actions for gender		
Key sub-sector challenges	**Priority actions to address challenges**	**Responsible agencies**
Service provision		
Poor gender balance across service providers, planners, regulators, and policymakers	• Encourage affirmative action in the recruitment of women among service providers and for other career paths in the WASH sector.	OHLGS/MSWR
Inadequate gender-disaggregated information on the use of WASH services	• Improve the monitoring and accountability of planners and service providers in relation to data and information related to gender access to WASH services.	MSWR/MLGDRD
Inadequate female consumer representation and an unequal power environment	• Enhance consumer representation and voice – especially of women at key sector institutions – individually and collectively. • Develop and tailor technical and payment/financial solutions that are gender-sensitive.	Civil society organisations/MSWR
Service providers do not understand different genders' needs	• Develop capacity among service providers, local government, and policymakers on the gender orientation of services. • Ensure that the design and implementation of WASH facilities take note of the needs of all sexes.	Civil society organisations/MSWR/MLGDRD/MWH/MMDAs

Priority actions for gender		
Key sub-sector challenges	**Priority actions to address challenges**	**Responsible agencies**
Lack of gender-friendly WASH facilities	• Ensure effective targeting in WASH programming. • Include changing rooms for women in WASH facilities.	MSWR/MMDAs
Weak gender mainstreaming coordinating role of the Ministry of Gender	• The Ministry of Gender should provide the required effective and inclusive national coordination role for gender mainstreaming.	MGCSP
Gender mainstreaming in the sector has not been consistent and systematic	• Ensure gender-sensitive WASH interventions align with sector policies and strategies.	MSWR
Regulation		
The absence of a mandate or a regulatory environment that encourages services to be gender-orientated	• Improve governance and strengthen the regulatory environment for the gender orientation of WASH services. • Pass the affirmative action bill into law.	MSWR/MGCSP
Finance		
Inadequate funding for agencies to mainstream gender equality	• Provide relevant funding for agencies to mainstream gender equality in their policies and procedures, and throughout the WASH services programme cycle.	MoF/MSWR/MLGDRD
Lack of monitoring and evaluation system to track progress of gender mainstreaming in WASH	• Integrate gender in monitoring and evaluation frameworks. • Support a consistent tracking and accountability system with specific gender-sensitive performance indicators in monitoring and evaluation indicators. • Ensure WASH monitoring targets and indicators include gender-disaggregated data. • Promote capacity building in gender in WASH at national and sub-national levels.	MSWR/MLGDRD

6.6 Climate change

Climate change is a global challenge that requires a concerted effort by all nations. There is already evidence of the direct manifestations of climate change in Ghana: increasing temperatures, rainfall variability (including unpredictable extreme events), and sea-level rise. These manifestations affect various facets of Ghana's socioeconomic structure, especially due to its high reliance on sectors that are particularly sensitive to climate change – water resources, agriculture, forestry, and energy production.

The human impact of climate change falls, for the most part, on the poor, and – very often – on women and children, the aged and the physically challenged. The WASH sector is also highly affected by climate change, through extreme events such as flooding and prolonged drought.

Extreme events resulting from climate change affect planning for resilient WASH services. Table 45 outlines the key challenges that climate change pose to sustainable WASH, and the priority actions that need to be taken to address the challenges.

Table 45: Key challenges and priority actions for climate change challenges in WASH

Priority actions for climate change		
Key sub-sector challenges	**Priority actions to address challenges**	**Responsible agencies**
Service provision		
Highly competitive water demand during droughts can affect availability of water for WASH activities	• Prioritise WASH water needs in the event of prolonged drought or water shortages. • Reduce agricultural water demand by developing climate-resilient crops and deploying efficient irrigation techniques. • Improve water use efficiency and encourage water recycle and re-use. • Deploy rainwater capture technologies as strategies for alternate water sources. • Prepare and implement an effective climate change strategy for WASH systems.	MSWR/WRC/MoFA/ GWCL/ CWSA/MMDAs
Extreme climate events (floods and droughts) can put communities at risk (poor water quality, limited access to water, destruction of WASH infrastructure, etc.)	• Build climate-resilient infrastructure (reservoirs, drains, boreholes, etc.) for cities and communities. • Train communities on the management of water resources and water infrastructure. • Build climate-resilient WASH infrastructure. • Deploy waste disposal systems to avoid the disposal of waste in water bodies during flooding. • Undertake IWRM. • Prepare and implement an effective climate change strategy for WASH systems.	MSWR/MWH/ MMDAs

Priority actions for climate change		
Key sub-sector challenges	**Priority actions to address challenges**	**Responsible agencies**
Service provision		
WASH activities contribute to climate change (such as greenhouse gases from improper SWM)	• Biodegradable solid waste should be processed in such a way as to harness the greenhouse gases for productive use. • Put in place a solid waste optimisation strategy (source separation, recycling, and re-use). • Prepare and implement an effective climate change strategy for solid waste systems.	MSWR/MLGDRD/ MMDAs
Lack of early warning systems for extreme climate events	• Deploy climate change early warning systems and disseminate information effectively for necessary action. • Prepare and implement an effective climate change strategy for WASH systems.	GMA/MSWR
Vulnerability of surface and subsurface water resources	• Implement integrated surface and groundwater management and planning.	MSWR MSWR
Capacity and other resource constraints at the local (MMDA) levels	• Strengthen capacity at decentralised levels (MMDAs).	MMDAs
Regulation		
Little or no alignment between MTDPs and existing national policies and other plans	• Ensure climate change actions align (through mainstreaming climate change) with Government of Ghana/MSWR policies and plans.	MSWR
Finance		
No direct investment allocated for climate change strategies	• Ensure budgets meet the level of investment required to implement climate change adaptation and resilient strategies. • Increase financing for climate change activities through innovative financing mechanisms like revolving fund, targeted subsidy, leverage private sector investments etc. • Develop a revolving fund to jointly finance local climate mitigation and adaptation actions.	MoF/MMDAs/GWCL/ CWSA/MSWR

Priority actions for climate change		
Key sub-sector challenges	**Priority actions to address challenges**	**Responsible agencies**
Service provision		
Monitoring and evaluation		
Uncertainties in climate predictions **No monitoring and evaluation system for climate change management and adaptation processes**	• Conduct research to develop comprehensive climate models. • Develop vulnerability maps to ensure designs are context-specific. • Prepare climate change standard performance metrics (indicators, procedures for data collection, analysis, reporting, and review). • Build capacity to monitor and evaluate the implementation of climate change strategies.	MSWR/MLGDRD/ GMA

MINISTRY OF SANITATION & WATER RESOURCES

7. Institutional development and sector strengthening

Institutional development and sector strengthening are pivotal for improving WASH sector performance and for the achievement of the sector vision, and targets. As part of efforts to ensure a vibrant WASH sector in the country the following five building blocks need to be in place in order to achieve the desired outcome and impacts: a) institutional arrangements; b) capacity development; c) sector financing; d) planning, monitoring, and review; and e) sector learning.

7.1 Institutional arrangements

Institutional arrangements include the policies, systems, and processes necessary to ensure the efficiency and effectiveness of the WASH sector. As indicated in an institutional study in 2020, the requisite legal, institutional, policy, and financial framework for WASH services delivery to achieve the sector vision, goals and targets are in place, though some areas require revision or updating, and there is also a need to fill some gaps to address new emerging challenges and developments. Some of these gaps include completion of the ongoing reforms in CWSA and the proposal to establish an NSA. The NWP is being revised and the ESP will soon be revised to meet current aspirations and demand.

The desk review and the various stakeholder consultations and interviews conducted while developing the GWASHSDP identified key challenges and priority actions necessary to improve sector institutional arrangements (see Table 46). At the sector level, the government, in collaboration with sector actors (development partners and civil society groups), will work together to ensure that sector institutions have the requisite updated policy, legal, and regulatory framework and a general congenial environment to promote efficiency and effectiveness in water resources management and WASH services planning, implementation, monitoring, evaluation, and reporting.

[25] Sanitation and Water for All–Building blocks for improved WASH sector performance https://www.sanitationandwaterforall.org/about/our-work/priority-areas / building-blocks

[26] Castalia (2020) 'Study of Institutional, Policy, financial and Legal Aspects of the Water and Sanitation Sector in Ghana'.

Table 46: Key challenges and priority actions for institutional development

Priority actions for institutional development		
Key challenges	**Priority actions to address challenges**	**Responsible agencies**
National level		
MSWR		
Weak alignment of sector and institutional performance with national, goals, targets, and budgets	• MSWR should collaborate with NDPC to put in place clear long-term goals and targets for the sub-sector that are aligned with the government budget. • MSWR should collaborate with NDPC, SIGA, and PURC to ensure that MDAs' and MMDAs' WASH goals and targets are aligned with national long-term targets, with performance contracts reflecting targets and goals.	MSWR with support of NDPC and other regulatory bodies
Weak capacities and capabilities in MSWR, especially the Directorate of PPBME, for sector coordination, harmonisation, monitoring and evaluation, and policy formulation.	• MSWR should adapt practice from Ministry of Energy, where sector agencies second senior staff to work at the ministry level for two to three years and then go back to their respective agencies. • Strengthen PPME to ensure a functional WASH sector information system to inform decision-making at all levels. • Legally establish and empower NSA to play a lead role in environmental sanitation activities. • Recruit qualified staff to fill existing vacancies at MSWR and agencies. • Create an enabling environment for vibrant PPP in the sector, at all levels necessary. • Restructure Schools of Hygiene to ensure training or development of requisite skills and knowledge on planning, implementation, management, communication for development, monitoring and evaluation, and reporting among environmental health assistants/officers.	MSWR
Lack of clarity on the geographical coverage, and roles and responsibilities, of CWSA and GWCL in regard to the attainment of national WASH goals and targets	• MSWR should ensure GWCL and CWSA collaborate with MMDAs to develop plans and strategies that harmonise their roles and the scope of their services, to ensure universal WASH is achieved. • MSWR should ensure reforms in CWSA, and the rural water sector are legally endorsed and redefine the strategic focus of the agency and roles and responsibilities of MMDAs.	MSWR

Priority actions for institutional development		
Key challenges	**Priority actions to address challenges**	**Responsible agencies**
National level		
Weak structural links between MSWR and MMDAs' Environmental Health and Sanitation Departments	• MSWR should ensure re-orientation and alignment as a new ministry, to ensure that its mandate corresponds with its structure, manpower requirements, and logistics. • Restructure EHSD to devolve to decentralised local levels (regional and assembly), with clear lines of reporting from local to national levels. • MSWR should ensure the establishment of NSA to fill the gap by providing technical assistance, supervision/monitoring and evaluation and reporting for the sanitation and hygiene sub-sector.	MSWR with support of MLGDRD and OHLGS
WRC		
Weak institutional capacities and capabilities to deal with water pollution	• Strengthen water resources management at basin level to cover all river bodies and establish inclusive sub-basin boards and offices to ensure effective links at the MMDA level. • Partner with research institutions and universities to undertake research and development studies to address pollution and other emerging challenges Form partnerships with traditional authorities, civil society groups (including faith-based organisations), and others to prevent pollution of water bodies at all levels.	WRC in collaboration with MMDAs and research institutes
GWCL		
Weak performance accountability to urban water consumers	• MSWR should collaborate with SIGA and PURC to ensure all key performance indicators are synchronised and aligned with national targets and vision and ensure performance contracts with government are realistic (few indicators, with an accompanying funding and financing plan for achieving targets). • MSWR should arrange public hearings with GWCL on performance reports.	MSWR in collaboration with SIGA, PURC and GWCL

Priority actions for institutional development		
Key challenges	**Priority actions to address challenges**	**Responsible agencies**
National level		
CWSA		
Professionalisation of community water supply (small town/ rural water) schemes is poor	• MSWR, in partnership with stakeholders, should undertake an assessment of the manpower and logistical needs of CWSA under the ongoing reforms to professionalise rural water supply schemes. • Complete ongoing reforms in CWSA by providing appropriate legal backing.	MSWR leading CWSA and other stakeholders
Sub-national level-local authorities		
Limited capacities, capabilities, accountability, and commitment of MMDAs in relation to WASH services delivery and water resources management	• MSWR should collaborate with NDPC to strengthen guidelines for WASH planning, monitoring, and reporting by embedding WASH plans, budgets, and targets in MTDP. • WRC should collaborate with MMDAs to establish water resource desks at the local level and to provide suitable water resource management orientation and training. • MSWR and agencies should support MMDAs to operationalise WASH MIS to generate timely data/information for decision-making. • MMDAs should use their authority and legal and regulatory powers to enforce bylaws and ensure effective and sustainable WASH services. • MMDAs should ensure adequate funding, staff, logistics, equipment, and incentives are provided to support WASH development and sustainability.	MSWR in collaboration with NDPC, MMDAs and WRC
Private sector		
Potential of private sector in WASH service delivery and sustainability not fully harnessed	• MSWR should support MMDAs in providing an enabling environment (including processes, procedures, and incentives) for encouraging private sector participation. • Provide needed information, orientation, and training to ensure more effective participation by private sector players and civil society in the provision of quality WASH goods and services.	MSWR leading MMDAs and sector actors

7.2 Capacity development

This section of the GWASHSDP, deals with the following three key elements: a) the capacity of institutions to fulfil sector roles and responsibilities for sustainable service delivery at scale, including the availability of necessary structures, tools, training, and incentives; b) the capacity of individuals to effectively engage in the sector through sector institutions or as educated consumers; and c) the capacity of sector stakeholders to adapt and innovate by engaging in sector learning

Improved skills and knowledgeable staff with requisite capabilities, resources, and logistics (such as motor bikes, vehicles, computers, etc.), and incentives to coordinate, harmonise, manage, and monitor various partners, stakeholders, and/or approaches at the national and sub-national levels are essential to achieve desired outputs, outcomes, and impacts in the sector. Human resources development will be mainstreamed in all future programme/projects that will be prepared, implemented, monitored, and reported on by MSWR, MDAs, MMDAs, and NGOs within the WASH sector.

The thrust of the human resources plan will be on a need basis, as determined by the role and responsibilities assigned to individuals and/or institutions. Various options will be explored, including mentoring, coaching, workshops, seminars, and formal training (in partnership with universities and other training institutions). MSWR and its various agencies and institutions will develop or review their respective capacity building and training plans for their own operations, undertake training needs assessments for staff, and develop a training plan to fill any gaps. Human resources development will be viewed as a continuous activity to ensure that the personnel of MSWR and its agencies, as well as sub-national institutions and the private sector, are empowered with the right logistics, mindset and motivation, including training. Thus, capacity development will be holistic – in the sense that training and human resources development will be complemented with the resources needed for institutions to carry out their mandates (equipment, offices, transport, etc.).

The effective alignment of EHSD staff at the national and sub-national levels will be given much attention. Unlike the Water Directorate, which has links with implementation agencies and institutions, the EHSD faces a huge gap between the policy and implementation arms of environmental services delivery. For this reason, the formal establishment of the proposed NSA will be given much attention. Equally, the ongoing reforms in CWSA will be better looked at as part of the entire decentralised arrangements for rural WASH services delivery in the country; aimed at ensuring harmony and optimum use of available human and material resources.

7.2.1 National level, including sector agencies

At the national level, human resources development will focus on building the capacities, capabilities, knowledge, and skills of the staff of MSWR and its agencies to be able to respond to policy formulation, planning, coordination, monitoring, evaluation, and reporting (among others) on sector activities or performance to various stakeholders and the citizenry. The two Directorates of MSWR (Water and EHSD) will be strengthened with qualified and experienced staff. MSWR will lead the sector to legally establish the NSA, which, among other things, will ensure the human resources development of staff of EHSD at all levels (national and sub-national). MSWR may adapt the approach being taken by the Ministry of Energy, where senior professionals are seconded to the ministry for a defined period to provide technical and experienced skills and knowledge that allow the ministry to appropriately lead the sector. At the MSWR level, some of the short-term capacity development interventions may cover the following: strategic planning; leadership and management; team building; effective communication skills; conflict resolution and management; monitoring and evaluation; and advocacy and lobbying.

7.2.2 Sub-national level

Emphasis will be placed on having more trained and experienced technical staff at the MMDA level to be able to plan,

implement, manage/coordinate, monitor, and report on delivering sustainable and inclusive WASH at scale to cover all populations in the local area. The Works Department will be strengthened through the addition of technical persons. The technical staff will be strengthened or trained in procurement, supervision, and monitoring of works to ensure value for money at all times. In addition, retraining of the staff of EHSD in promoting sustained behavioural change among the citizenry and communication for development will be enhanced.

Equally, the capacities of the private sector and civil society groups to understand government processes and procedures, as well as the legal and regulatory frameworks, will be enhanced. Without positive development of the private sector capacity to deliver competitive and quality services, the wider national programme goals of improved livelihood will not be achieved. The cost of private sector capacity building activities will be recovered through improved quality of services and reduced costs of both public and private investments. Cost-effective and good-quality services in the private sector are a prerequisite for achieving the targets for access to WASH services – through communal and institutional WASH services, as well as households' own investments in sanitation and self-supply water technologies. The active participation of the private sector and civil society groups is critical to the sustainability of the WASH sector in Ghana. The promotion of PPP is one of the issues to be addressed under private sector led investment in the sector.

Funding of sector restructuring and human resources development (particularly for the public sector) should be included in the government budget, and the new sanitation tax, as well as from future projects financed by development partners.

7.3 Sector financing

The sector aims to recover the lifecycle cost of providing sustainable WASH services while recognising the affordability concerns, particularly for identifiable groups that cannot afford the cost of WASH service delivery.

The main sources of finance are the government (through taxes), users (through tariffs), and transfers in the form of grants. Given Ghana's status as a lower middle-income country and the government policy of focusing on trade instead of grants, the dominant source of finance will be from the government and from users. This calls for an innovative mechanism to increase WASH investment to achieve the sector goals and targets. Table 47 provides a summary of the key challenges and opportunities identified during the various consultative processes.

Table 47: Funding challenges and proposed solutions

Challenges	Opportunities
MSWR and national level	
Inadequate financial support for sector capacity and institutional strengthening activities	• MSWR ensures inclusion of sector capacity development in all future programmes/projects (10–15%). • MSWR ensures on-budget allocations include capacity development for the ministry and its agencies/institutions.

Challenges	Opportunities
Inadequate financing for WRC, GWCL, and CWSA (sector investments and operations)	• MSWR ensures GWCL and CWSA develop business plans to raise the capital needed for CAPEX. • MSWR ensures GWCL and CWSA incorporate cost recovery measures in their operations. • Government regularly pays GWCL and CWSA for water consumed by public agencies. • Lobby for DACF at the Office of Parliament and DACF Secretariat to prioritise WASH in the use of DACF resources. • MSWR advocates to other Cabinet members for increased on-budget allocations as sector performance has significant positive and/or negative outcomes and impacts on education, health, children, etc.
Inadequate funding of environmental health and sanitation, particularly on financing human resources development	• MSWR ensures the new sanitation tax is properly used and accounted for, for the benefit of the sector. • MSWR collaborates with stakeholders to develop a costed human resources plan and strategy for EHSD. • MSWR lobbies for on-budget allocation for human resources development.
MMDAs (local authorities)	
Inadequate financing of WASH activities	• MSWR, in collaboration with NDPC, DACF Secretariat, MLGDRD, etc., ensures MMDAs include and prioritise WASH in their budgets (especially from IGF). • MSWR, in partnership with MLGDRD, OHLGS and NDPC, guides MMDAs to improve the generation and collection of property tax to increase IGF. • MSWR, in partnership with NDPC, MLGDRD, and OHLGS, develops WASH plans to attract NGOs and private sector.
Revenue generated from service provision not always properly managed	• MSWR leads reforms in the community water sub-sector to legally make CWSA a utility organisation for small towns' piped schemes. • Ensure adherence to existing financial, procurement, audit, and accountability framework for public sector operations. • CWSA, as utility agency, is supervised and monitored by PURC (among others).
WRC	
Inadequate on-budget support	• MSWR and partners advocate for government budgetary allocation. • MSWR and WRC Board ensure judicious use of IGF. • MSWR and WRC Board ensure WRC enforces bylaws and that sanctions are paid by defaulters.

Challenges	Opportunities
Urban water supply	
Inadequate finance for both operating and capital expenditure	• GWCL sets up depreciation fund (for replacement of fixed assets) and a sinking fund (for CAPEX). • Government ensures timely payment of bills from government agencies. • Government supports PURC to ensure average water tariff reflects full cost of water supply. • Government encourages private sector to be a shareholder in GWCL. • NRW reduced to best practice level, from current 51% to 20% and below. • Ensure GWCL fully recovers cost through efficiency gains and pro-poor schemes. • GWCL is accountable and transparent on the use of available resources to ensure value for money in operations. • Develops business plan and increase collection rate of tariffs to 90% and above. • Continue with concessional financing arrangements to replace and expand capital.
Rural water supply	
Inadequate funds as some development partners have withdrawn from the sub-sector	• Optimise the use of the 2% of GWCL revenue dedicated for rural water. • Government pays tariffs of public agencies in small town communities in a timely fashion. • CWSA continuously works to reduce NRW small town water supply. • Efforts are made to ensure off-budget resources from NGOs are transparently used for the sector. • Government increases on-budget allocation to the sub-sector. • Blended or commercial financing are explored for the sub-sector. • MSWR, in collaboration with NDPC and SIGA, coordinates other quasi-state institutions in sub-sector to avoid duplication of efforts and waste. • MSWR ensures that CWSA prepares marketable investment and/or business plans to attract private sector financing (among others).
Inadequate public funding	• MSWR advocates at Cabinet level for increased funding for the sector. • NGOs and media mobilise to advocate for more on-budget funding as the sector has a close relationship with education (especially girl child education, gender equity, health outcomes, among others). • CWSA is supported to finance some capital investments through retained earnings (cash from operations) and commercial loans, especially for sizeable, small-town communities.
Environmental sanitation and hygiene	

Challenges	Opportunities
Inadequate funding of the sub-sector	• Sanitation tax on fuel – but MSWR should proactively ensure money is spent for the purpose outlined. • Local authorities create enabling environment for PPP in the sector, particularly in waste collection and management. • Local authorities enforce laws that adopt the polluter pays concept. • Local authorities enforce existing building and bylaws on environmental sanitation, including the construction of toilets in homes. • MSWR collaborates with other stakeholders (public and private and civil society) to optimise the use of available funds and efforts for hygiene intervention.
Lack of uniform mechanisms and systems of financial flows	• MSWR ensures all public sector funding in the WASH sector follows existing financial and procurement systems and procedures. • MSWR ensures all programmes/projects adhere to the provisions of various audit laws and regulations.

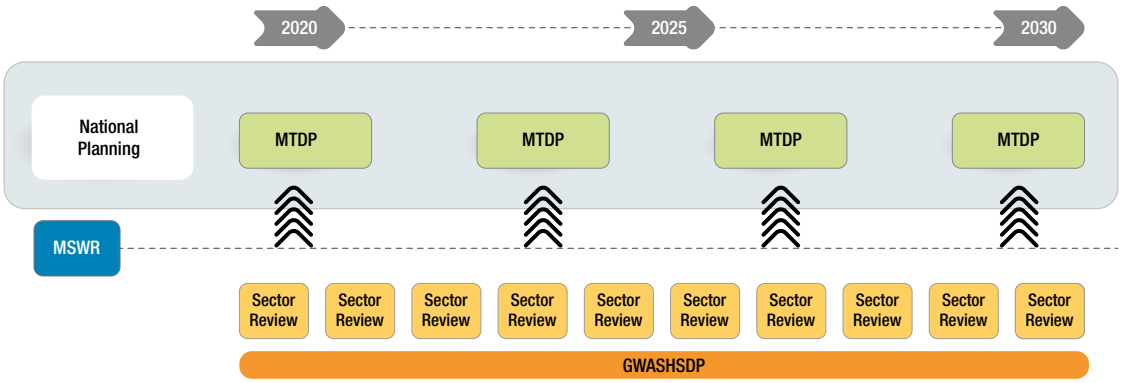
The following are some strategies to increase the financing of the sector:

- Establish a strong regulatory framework to monitor performance and enforce guidelines for tariff-setting to ensure cost recovery and efficient operations.
- CONIWAS and its partners should support MSWR to advocate for government and development partners to increase funding to the sector as this is critical to the attainment of other SDG sector goals, such as women's parity in education, improved health status of the population, etc.
- Develop bankable projects, with thorough financial and Net Present Value analysis to attract increased finance in the sector. In addition, the growing number of climate funds could be accessed by more clearly articulating the positive impacts that investing in the WASH sector could have in regard to mitigating the effects of climate change.
- Increase access to private finance through PPPs by build the capacity of WASH providers to engage lenders. For example, Pension funds and bonds could be used to create favourable conditions to support pension fund investment in the WASH sector through both regulation and regulatory oversight.

7.4 Sector planning

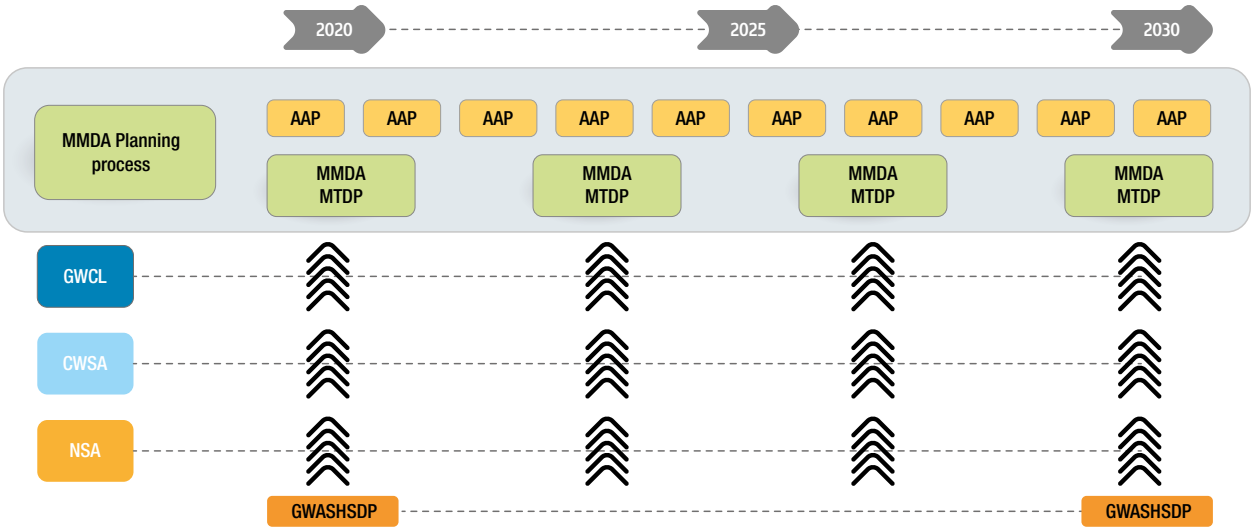
Inclusive sector planning, involving key stakeholders such as government, development partners, NGOs, and the private sector, will be promoted as part of the sector development and strengthening agenda at both national and sub-national levels. The participatory processes will promote ownership and better understanding of sector goals, objectives, and targets to all actors. The MTDP is a key national planning process and the GWASHSDP provides the basis for guiding the sector's inputs into this process, as illustrated in Figure 8 below. As time goes by the sector review process will provide a status update on WASH progress, and this in turn will guide planning process for the MTDP.

Figure 8: GWASHSDP links to national planning processes



At the sub-national level, in collaboration with the NDPC, a planning, monitoring, and reporting template (attached as Annex C) will be adopted by MMDAs. GWCL, CWSA, and NSA (when legally established) will support the MMDAs in this planning process and will help set and monitor local WASH targets, with regional reviews routinely feeding information into the SPR. Once the process becomes a regular one, the demand for more accurate results should help strengthen the SIS.

Figure 9: GWASHSDP links to sub-national planning processes



Previously, the MTDPs and Annual Action Plans were guided by the NESSAP and WSSDP. However, funds at the MMDA level are limited and many of the WASH activities are not captured in the composite budget. Unlike MoH or MoE, there are no MMDA staff directly linked to MSWR, so it is crucial that the sector agencies (CWSA, GWCL, NSA-when established) support this process to strengthen WASH implementation at the sub-national level. Some of the key challenges, and priority actions to address these challenges, are listed in Table 48 below.

Table 48: Key challenges in planning, budgeting, and reporting

Key challenges	Priority actions to address challenges	Responsible agencies
Sub-national planning and budgeting		
WASH requirements not always captured in composite budget	• Ensure performance management contracts with MMDA and local government services and SIGA. • Ensure inclusion of WASH indicators in Performance Assessment Tools of Assemblies (MMDAs) • Engage Parliament to prioritise WASH in the DACF allocations to MMDAs as a way of increasing funding of the WASH sector. • Engage MoF to include budget lines for WASH activities in the budget template sent to MMDAs.	MSWR in collaboration with SIGA, MOF, DACF and Office of Parliament (Parliamentary Select Committee on Works and Housing which has responsibility on sanitation, water supply among others)
Hardware prioritised over software	• Sensitize political leadership on the importance and need for budgeting of software activities to promote WASH sustainability at the community level. • Sensitise Task Managers on software and sustainability. • Set aside 10-15% of project budgets for software and sector strengthening/capacity building activities for sustainable and viable WASH sector in the country.	MSWR lead MMDAs and other service providers (including politicians) to budget for software and general community development activities
RCCs unable to harmonise/coordinate WASH planning at MMDA level'	• NDPC guidelines to RCC and MMDAs should emphasise WASH activities in MTDPs. • RCC regional coordination and monitoring checklist should highlight WASH to ensure MMDAs prioritisation of the sector in their respective development plans.	MSWR in partnership with NDPC to include guidelines to RCCs and MMDAs
Monitoring and reporting		
MMDAs lack capacity to effectively monitor WASH status and relevant activities	• Funding for logistics (e.g., motor bikes/vehicles and fuel) need to be prioritised in new project designs, annual workplans and medium-term development plans. • Provide training in participatory monitoring and evaluation to key district staff in routine capacity development activities. • Mainstream monitoring and evaluation into key roles and functions of MMDA staff.	MMDAs

Key challenges	Priority actions to address challenges	Responsible agencies
WASH MISs not standardised at district level	• Include harmonised WASH indicators in district data development plans. • Ensure each local authority has a functional MIS in place.	MMDAs
WASH activities not adequately captured in the standard reporting formats	• In collaboration with NDPC, develop an integrated WASH reporting format for MMDAs and RCCs. • Set standard target definitions for WASH activities in the annual reporting format (and quarterly).	MMDAs

7.5 Sector learning and knowledge management

Sector learning and knowledge management is focused on improved learning, sharing, and dissemination/discussion of issues to inform the delivery of affordable and reliable water and sanitation services, as well as the assessment and management of water resources. The knowledge management activities that inform sector development are a) a national stock-taking forum; b) an annual NGOs conference (MOLE); c) the National-Level Learning Alliance Platform (NLLAP); d) working groups (water and sanitation); and e) joint sector reviews (JSRs). The main focus of the learning platforms is to mainstream/embed knowledge, experience, and lessons learned from practices (programme and project implementation) and sector research to improve sector development (see Table 49).

Table 49: Learning platforms and required priority actions

No	Learning platform	Description	Priority actions
1	**National stock-taking forum**	Annual event to take stock of sanitation and hygiene	Ensure forum is well-coordinated and results are disseminated and replicated in sector activities annually from 2021 to 2025.
2	**NGOs annual conference (MOLE)**	Annual NGO conference on WASH	
3	**NLLAP**	Monthly meeting to discuss WASH	Extend NLLAP learning platform to regional and district levels by 2015.
4	**Working groups (water and sanitation)**	Monthly	
5	**JSRs**	Annual JSRs	Extend JSRs to include other stakeholders (private sector, NGOs, and academia).

8. Management and organisation of the programme

This chapter sets out the management arrangements for effective and efficient delivery of the GWASHSDP. The MSWR, through the WASH Sector Working Group, will lead the smooth management of the sector through annual sector planning, SPRs, and other review processes for improved accountability and coordination. This will also help to highlight the gaps in the sector (notably; inconsistent MIS data, uncoordinated planning within the sector, and limited integrated planning with other sectors) and formulate actions to improve performance.

8.1 Programme management arrangements

The overall programme management and coordination functions will be undertaken by MSWR (led by the Minister and Chief Director), who will have the responsibility for the consolidation of workplans, physical outputs and financial reports, monitoring and evaluation, and follow-ups. PPBMED will lead the ministry in this respect.

8.1.1 Ministry of Sanitation and Water Resources (MSWR)

The MSWR and its Directorates will be the overall managers of the GWASHSDP. They will develop programme plans and budgets, and will coordinate the reporting and review process, together with the sector agencies (WRC, GWCL, and CWSA) and in coordination with NDPC/MLGDRD and other line ministries, such as Ministry of Gender, Children and Social Protection, Ministry of Education, and Ministry of Health. In addition, the Ministry (MSWR), in collaboration with SIGA, will supervise the performance of the sector agencies and institutions. The MSWR will be responsible for collecting relevant information through the Sector Information System (SIS) to provide annual updates on programme progress against sector targets and priority actions. The MSWR will require stakeholders to provide the reporting needed to inform WASH sector development (see the template for planning and reporting provided as Annex C). The NDPC indicators are high-level and additional indicators are required from the WASH sector. The MSWR will ensure that planning and reporting formats are used by the stakeholders to get a good understanding of the state of the sector to inform planning and decision making. The monthly and mid-yearly meetings of the Minister and the leadership of the ministry and sector agencies (WRC, CWSA, and GWCL) will be used to track the progress and performance of the sector as well as resolve emerging management and operational challenges.

The MSWR will strengthen existing structures, such as the Sector Working Group (SWG) and the sub-groups on thematic issues such as monitoring and evaluation, water, sanitation, and WASH in emergencies. The MSWR will provide technical support to ensure these are operational and that overall management improves over time. Similarly, the boards of WRC, GWCL, and CWSA will support the Ministry in the management of the GWASHSDP as it relates to these sub-sectors. It is hoped that the National Sanitation Authority (NSA), when established, will provide management supervision of the environmental health and sanitation sub-sector under the programme.

8.1.2 Inter-Ministerial Committee

The MSWR has initiated an Inter-Ministerial Committee (made up of the Minsters of Finance, Education, Health, Local Government, etc.) to foster closer collaboration and partnership with other sectors. The committee will be mainstreamed and strengthened

as part of the programme management structure, which will be included in the sector calendar and activities.

8.1.3 WASH Sector Working Group (SWG)

The WASH SWG – comprising stakeholders from government institutions and agencies (MMDAs related to WASH) whose roles and responsibilities cut across WASH, civil society organisations, and development partners – will meet to agree on sector budget submissions and new projects proposed for the sector. In addition, the SWG will review sector performance and deliberate on key sector policies. The SWG will ensure efficient and effective long-term and annual planning, monitoring, and policy guidelines for the WASH sector. It will be a key decision-making body for the programme. It will also provide guidance in resources allocation in the sector to promote socioeconomic and spatial equity, including both on-budget (under the Medium-Term Expenditure Framework) and off-budget (especially from NGOs/the private sector and some development partners) resources. The SWG's main functions include:

- ensuring efficient and effective planning, monitoring, and policy guidance for the programme.
- approving WASH sector annual plans and budgets, and MTDPs, and reviewing progress and adjusting as necessary.
- coordinating the implementation of WASH services by ensuring social and geographical equity, with special emphasis on serving the poor and vulnerable; and
- strengthening IWRM at basin and local levels to secure and provide water of adequate quantity and quality for all social and economic needs of users and with the full participation of all stakeholders.

8.1.4 Key challenges and priority actions on general management

The key programme management challenges, and priority actions to address these, are listed in Table 50 below.

Table 50: Key challenges and priority actions on general management

Key challenges	Priority actions to address challenges	Responsible agencies
General programme management		
Weak sector leadership by government	• MSWR should own the entire programme management process, and hence should include it in the sector calendar as an important sector event. • MSWR, in partnership with development partners and NGOs, should budget for and finance sector events, such as funding sector engagement platforms. • Strengthen the capacity of the Policy, Planning, Budgeting, Monitoring and Evaluation Department. These include skills, knowledge, logistics, and funding.	The PPBMED of MSWR will lead

Key challenges	Priority actions to address challenges	Responsible agencies
General programme management		
SWG activities not mainstreamed in sector agenda	• Review terms of reference and link to the review process and annual planning approvals. • Mainstream the various Technical Working Groups (TWGs) into sector plans and the sector calendar, and also provide requisite logistical support for operations. • SWG should provide inputs on annual plans and the budget.	The PPBMED of MSWR will lead
Limited collaboration with other sectors (education, health, gender, etc.) in programming	• Sustain and mainstream inter-ministerial routine meetings with Education, Health, Local Government, Finance, Environment, Gender, as a way of strengthening coordination, collaboration and partnership as well as ensure implementation of one national WASH Programme by all. • Encourage participation and learning in JSR for other sectors.	Chief Director of MSWR in collaboration with the PPBMED

8.2 Programme review and adjustments

The review process will include the following steps:

- A Performance Measurement Framework provides the key performance indicators for the sector and the method for collecting and analysing this information.
- Information is used to produce an annual Sector Performance Report (SPR) that provides status updates and progress against annual plans. The SPR provides an annual assessment of investments, targets, achievements, and outputs, and highlights the major challenges and strategic issues which affect performance.
- The JSR considers issues raised by the SPR and makes high-level recommendations for improving sector performance.
- The JSR recommendations inform the next annual planning and budgeting cycle.
- The process is repeated every year.
- The main outcomes of the review are:
  - » Raising key issues and actions (undertakings) to be implemented during the next 12 months in order to improve the overall sector performance for each subsequent year.
  - » Guiding the annual planning and budgeting process for the subsequent year in terms of sector priorities and strategic interventions.

Any binding decisions during the JSR, such as key actions or undertakings for the forthcoming 12 months or beyond, are subject to formal endorsement by the SWG. The JSR will critically examine the achievement of annual targets (as spelt out in the MDAs' annual, medium-, and long-term plans and the government's financial commitment to the sector), for the key sector performance indicators, agreed actions, and the attainment of undertakings for the preceding year(s), and will also formulate new undertakings to be implemented during the following year(s). The timing of the JSR should be linked to the commencement of preparations for the subsequent national workplan and budget cycle, and MMDAs' workplans and budgets.

Some of the key challenges in the sector review process, and priority actions to address these challenges, are listed in Table 51 below.

Table 51: Priority actions for programme review

Key challenges	Priority actions to address challenges	Responsible agencies
Sector review process		
SPRs and JSRs are irregular	• MSWR should include, budget for, and sustain SPRs and JSRs in the sector workplan. • SPRs and JSRs should take place on an annual basis.	MSWR
Limited capacity and resources to conduct JSRs and SPRs	• Strengthen partnerships and collaboration by mobilising resources from MSWR, other related public institutions, donors, and NGOs for smooth implementation and management of the Programme. • Strengthen PPME with the requisite staff capacities, logistics and funding to enhance performance in providing reliable and timely data to support planning and decision making. • As an interim measure, obtain technical support from sector agencies to assist the ministry in organising the JSR.	MSWR in collaboration with sector agencies and stakeholders

8.2.1 Sector Information System (SIS)

An SIS is needed to provide all the relevant WASH sector information in a timely manner for decision-making. MSWR has been working on the establishment of an SIS that will be linked to the MISs for the sub-sectors (WRC, GWCL, and CWSA). There are five sub-sector MISs that are in place (see Table 52). All the sub-sector MISs are functional but some are yet to be deployed nationwide due to financial constraints. Table 52 presents the challenges faced by the sub-sector information systems.

Table 52: Challenges faced by sub-sector information systems

MIS	Description	Key challenges
BaSIS	Information system for rural sanitation.	Rolled out to 81 districts where MMDAs are conducting CLTS, with support from development partners. UNICEF willing to support training for roll-out but does not make sense without CLTS programme.
DiMES	Information for rural and small-town water services.	CWSA claims that DiMES is working but through their staff and not through MMDAs – so MMDAs do not have access.
ERM	System for monitoring GWCL process.	Limited to urban water services from GWCL. Working well to provide GWCL data but does not report on the SDG 6.1 indicators.

MIS	Description	Key challenges
EMIS	Information system for WinS.	Does not cover hygiene indicators (including MHM).
District health information management system	Information system for district health.	Does not provide data on WASH for healthcare facilities.

The approach for improving the SIS is as follows:

- Scale up BaSIS in all districts and integrate it with SIS.
- Update BaSIS to cover urban sanitation.
- Establish a dedicated information system for WASH in healthcare facilities and integrate this with SIS.
- Integrate all the sub-sector information systems into the SIS, whilst ensuring that WASH services provided by all actors (such as private sector, NGOs, self-suppliers, etc.) are captured, to give an accurate picture of the WASH situation.

The cost of finalising the development and implementation of the SIS at all levels (national, regional, and district) is captured in the implementation plan. When fully functional, the SIS will provide the necessary information for the SPR and golden indicators.

8.3 Financial management

The WASH sector uses the Medium-Term Expenditure Framework (MTEF) to ensure government priorities are captured and match the available resources. The management of financial resources to achieve desired objectives will cover a series of interrelated tasks, such as planning, budgeting, disbursement, accounting, reporting, internal control, auditing, procurement, and physical performance tracking in line Ghana's public financial management system is based on legal and regulatory frameworks that set out the appropriate budget and accountability structures in accordance with the 1992 Constitution and other acts of Parliament. These include the Public Financial Management Act, 2016 (Act 921); Financial Administration Regulations, 2004 (LI1802), the Public Procurement (Amendment) Act, 2016 (Act 914); the Internal Audit Agency Act, 2003 (Act 658); the Audit Service Act, 2000 (Act 584), Internal Audit Agency Act , 2003 (Act 658). Funds utilisation and accounting will also be carried out using the Ghana Integrated Financial Management Information Systems (GIFMIS), which is a Government of Ghana electronic financial module for the management of public funds.

8.4 Communication strategy

MSWR, in collaboration with various stakeholders, will develop a GWASHSDP communication strategy to create sustained buy-in and/or acceptance of WASH, based on the idea that 'safe water is life', 'sanitation is dignity', and 'hygiene is health'. The strategy will (among other things) focus on publicity and the dissemination of relevant policies, strategies, guidelines, and technical standards on WASH services delivery and water resources management within the country's overall development agenda. A multi-media approach, targeting various socioeconomic segments of the society, will be developed and costed.

8.5 Risks and assumptions for the programme measures

The overall risks which are the threats that may adversely affect the smooth execution of the GWASHSDP have been identified and are outlined, alongside assumptions which are the anticipated conditions to be nurtured and perpetuated to curtail the potential risks (Table 53).

Table 53: Risks and assumptions

Risk	Assumptions
Failure in fiduciary and governance structures, especially stalled progress in ongoing institutional strengthening	Strong trust in governance structures and institutions, including enacting an appropriate legal framework that supports ongoing institutional reforms and strengthening.
Inadequate political commitment and support to the sector, especially in reforms and funding	Strong political and leadership commitment to sector reforms and the required levels of funding.
Non-responsive and weak inter- and intra-sector cooperation among stakeholders	Strong inter- and intra-sector cooperation among all stakeholders at all levels.
Political risk – Ghana does not continue to enjoy political stability and democratic governance	The country will continue to enjoy political stability and democratic governance.
Global economic instability/a recession that affects general macro-economics, access to and cost of funds (including loans and grants from development partners), etc.	Stronger national macro- and micro-economic stability to be able to absorb shocks from global pressures/instabilities.
Low financial investments from the private sector	Incentives to improve and sustain attracting private sector participation in investments and other capacities and roles in the sector.
Complex climate risks and unpredictable natural disasters and emergencies	The sector embraces technologies and adaptive approaches that are resilient to climate risks, natural disasters, and emergency events/episodes in WASH services delivery.

GT
MU
%
M+
8
9
6
5
3
2
1
=
00

9. Cost of the programme

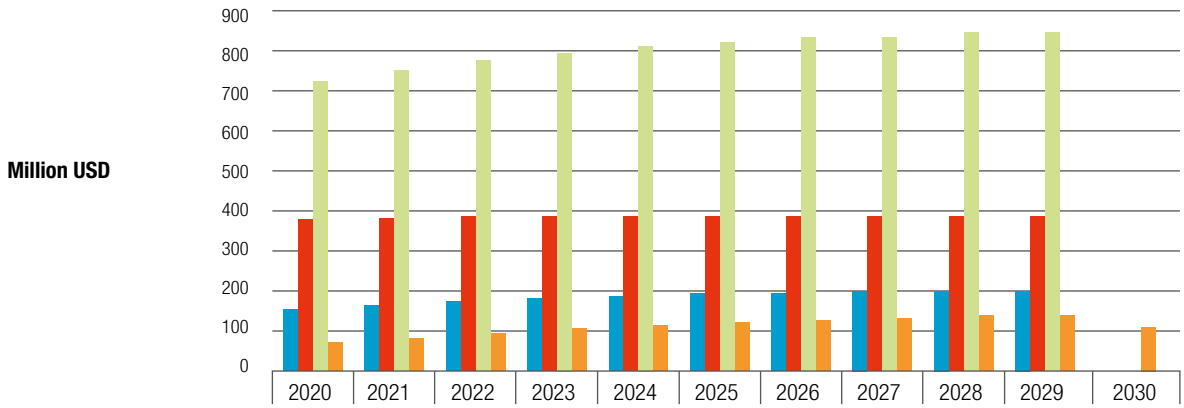
This concluding chapter presents the cost of implementing the GWASHSDP. The cost covers maintaining existing services and expanding services to all inhabitants in the period from 2021 to 2030. The cost estimate is based on coverage in 2020 and population changes expected between 2020 and 2030.

The programme components are water resource management, urban water supply, rural/community water supply, sanitation, hygiene, and systems strengthening. System strengthening covers capacity development, establishing and maintaining an effective monitoring system, and strengthening and scaling up WASH learning initiatives.

9.1 Cost of WASH in urban areas

The cost for the urban areas covers four components: basic water supply, a safely managed water supply, basic sanitation, and hygiene services (handwashing stations, soap and water). The results are shown in Figure 10 below: an annual average of US$ 1.2 billion is required to achieve the targets for Scenario 1.

Figure 10: Capital costs to reach unserved population in urban areas (US$ million)



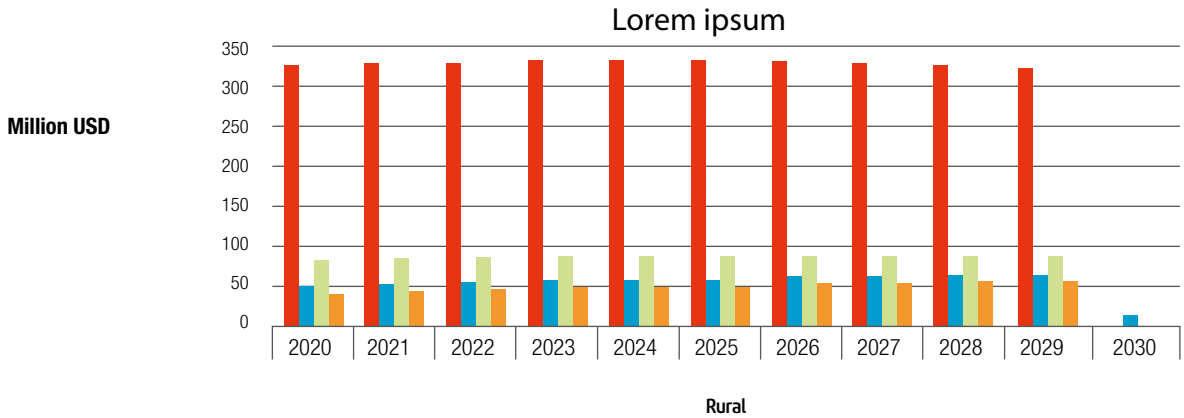
Urban
Cost from 2015 to target year (US$ million)

	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Basic water supply	154	164	173	180	186	192	196	199	202	204	-
Safely managed water supply	372	377	381	383	384	384	384	382	380	377	-
Basic sanitation	711	739	762	781	797	810	819	826	830	832	-
Handwashing station, soap & water	73	86	96	106	115	122	128	134	139	139	111

9.2 Cost of WASH in rural areas

The cost for the rural areas covers four components: basic water supply, a safely managed water supply, basic sanitation, and hygiene services (handwashing stations, soap and water). The results are shown in Figure 11 below: an annual average of US$ 500 million is required to achieve the targets for Scenario 1.

Figure 11: Capital costs to reach unserved population in rural areas (US$ million)



	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Safely managed water supply	326	329	330	331	330	329	328	326	323	320	-
Basic water supply	50	53	56	58	60	62	63	64	65	65	13
Basic sanitation	84	85	87	88	88	89	89	89	88	88	-
Handwashing station, soap & water	41	44	47	50	52	54	56	57	58	59	-

9.3 Cost of the other components

The cost of the other components, which are water resources management and systems strengthening, are detailed in Annex B (the implementation plan). The estimated average annual cost to achieve Scenario 1 is summarised in Table 54 below.

Table 54: Estimated annual cost for achieving Scenario 1

	Component	Annual cost (US$)	Remarks
1	**Water resources management**	8 million	
2	**Urban water supply**	420 million	
3	**Rural/community water supply**	350 million	
4a	**Basic sanitation – urban**	700 million	70% of the cost to be borne by beneficiaries and 30% by government as support costs and targeted subsidies.
4b	**Basic sanitation – rural**	100 million	
5	**Hygiene**	60 million	
6	**Support cost for systems strengthening**	60 million	

Annex A
Policy, legal, and regulatory framework

This annex presents the key policy, legal, and regulatory framework for the various components of the WASH sector programme – water resources management, water supply (rural and urban), environmental sanitation (liquid and solid waste management), hygiene, WASH in institutions (schools and healthcare facilities), and cross-cutting issues.

A.1 Water resources management

Table 55: Policy, legal, and regulatory framework for water resource management

Legal and guiding documents for IWRM
Legislation
WRC Act 522 of 1996: Act 522 establishes the WRC and provides for its composition and functions in regard to the regulation and management of the utilisation of water resources in Ghana, and for related matters. **EPA Act 490 of 1994:** Act 460 establishes the EPA, with the mandate to protect the environment (air, water, and land).
Policy
Buffer Zone Policy (2013): The Buffer Zone Policy is a regulatory document regarding buffers bordering water bodies or river systems, which is designed to provide comprehensive measures and actions. **NWP (2007, undergoing review):** Ghana's NWP is a framework that has been formulated to guide the sustainable use, management, and planning of water resources for drinking and other domestic uses.

Legal and guiding documents for IWRM
Strategies, frameworks, and plans
IWRM plans for the basins: Basin-based IWRM plans are blueprints that describe the current state of water resources, outline strategies that enable basin-based water management, and provide steps to be taken towards realising visions which adhere to the stipulations in the NWP. **National IWRM Plan (2012):** The National IWRM Plan sets out the direction and implementation framework for the legal and institutional development required to achieve the overall goal of water resources management in the country. **Groundwater Management Strategy 2011:** The WRC has developed the Groundwater Management Strategy to guide long-term responsive groundwater polices, actions, and services to ensure the safety of people, to enhance economic activity, and to promote groundwater sustainability. **WSSDP (2012–2025):** The WSSDP sets out Ghana's commitment to, and provides the framework for, achieving the vision in respect of water, which is 'sustainable water and basic sanitation for all by 2025'. **National Infrastructure Plan – Water Resources Management (2017):** This spells out the government's vision and strategic direction for infrastructure development and priorities over the next 30 years. **National Drinking Water Quality Management Framework (2015):** This provides a guide for all water supply agencies on effective drinking water quality management and public health protection.
Manuals, guidelines, and studies
Spillage and dewatering guidelines (2018): Provide guidance on the dewatering and spilling of raw water by providing technical and practical steps for both regulators and proponents to facilitate the issuance of permits (case-specific), whilst protecting the environment and individuals.
Aquaculture guidelines (2019): Provide technical and practical steps for both regulators and proponents to facilitate the issuance of permits, licences, and certificates, while protecting the environment and human health, and investments.
Training manuals for MMDAs on Water Sources and Catchment Protection (2015): Developed to equip the MMDAs to manage their water resources in a sustainable manner.
Regulatory instruments:
Water Use Regulation (LI 1692): Outlines the procedure for acquiring water rights for various categories of water uses.
Environmental Assessment Regulation (LI 1652): Outlines the procedure for protecting the environment (air, land, and water) through Environmental Impact Assessment Management Plans.
Drilling Licence Regulation (LI 1827): Outlines the procedure for acquiring a drilling licence to construct a well or borehole for abstraction or groundwater monitoring.
Dam Safety Regulation (LI 2263): Outlines the procedure for acquiring a dam safety licence to show that a dam does not present a safety risk.
Buffer Zone Regulation (in development): Provides comprehensive measures and actions to guide coordinated creation of vegetative buffers for the preservation and functioning of water bodies and vital ecosystems.

A.2 Urban water supply

Table 56: Summary of policy, legal, and regulatory framework for urban water supply

Legal and guiding documents for urban water supply
Legislation
GWCL Act 1965 (Act 310) and Act 461 of 1993 as amended by LI 1648: First established the Ghana Water and Sewerage Corporation and then the subsequent conversion into GWCL with the mandate to provide water supply services to the urban population and released sanitation service delivery to MMDAs. **PURC Act 538:** Gives PURC the mandate to approve GWCL tariffs and to regulate the quality of GWCL services. **PURC Consumer Service Regulation LI 2413:** Provides rights and obligations of consumers and utility (GWCL). **Standards Authority Act, 1973:** GSA sets standards for drinking water quality, testing procedures, and equipment; also promulgates national building codes, and authorises voluntary use of 'Mark of Conformity' by packaged water producers (e.g., sachet vendors). **Public Health Act, 2012 (Act 851):** Under the act, the FDA regulates packaged and bottled water production through producer inspection and regulation. **SIGA Act, 2019 (Act 990):** Provides for performance monitoring of GWCL through performance contracts.
Policy
NWP (currently under revision as at 2021): The NWP is intended to provide a framework for the sustainable development of Ghana's water resources. Currently being revised to re-align with the SDGs and the Africa Agenda 2063.
Strategies, frameworks, and plans
National Drinking Water Quality Monitoring Framework: The framework outlines the management of drinking water quality, which includes the systematic identification of risks, the implementation of Water Safety Plans, effective monitoring and evaluation, and the regulation and coordination of roles and responsibilities of all relevant actors. **GWCL SIP Review and Updating Final Report November 2008:** Sets out investment requirements for rehabilitation and expansion of the existing 81 urban water supply systems to meet their short-term (2011) and long-term **(2015, 2025) water demands in line with the government's MDGs. This needs to be updated to reflect the SDG national targets.**
Manuals, guidelines, and studies

Legal and guiding documents for urban water supply
GWCL Customer Charter: Provides a clearer understanding of what customers should expect from GWCL and what their responsibilities towards the provision of water services are. **Study on Equitable Water Supply Services in Low-Income, High Population Density Urban and Peri-Urban Areas:** Identifies the key factors and cost-effective models to enhance equitable access to sustainable water services in low-income urban and peri-urban areas.
Regulatory instruments
Tariff-setting: PURC Act 538 gives PURC the mandate to approve tariff proposals submitted by GWCL (but not the other water service providers). **GWCL performance in delivering services:** PURC consumer service regulation (Legal Instrument 2413) has key performance indicators for measuring GWCL's performance in providing urban water supply services but does not apply to the private sector. **Water quality:** PURC is also responsible for regulating water quality from GWCL under GS 175, but this does not cover private sector schemes or self-supply. PURC has developed guidelines for tanker water supply.

A.3 Rural water supply

Table 57: Summary of policy, legal, and regulatory framework for rural water supply

Legal and guiding documents for rural water supply
Legislation
Act 564 CWSA Act 1998: Facilitates the provision of safe water and related sanitation services to rural communities and small towns, provide technical assistance to DAs, formulate strategies, collaborate with other ministries and institutions in the delivery of rural water services. **Public Health Act, 2012 Act 851:** The DAs are responsible for the provision of the wholesome supply of potable water and monitoring water quality. FDA/DAs regulate packaged water operations in Ghana. **Local Governance Act, 2016 Act 936:** A DA is responsible for the overall development of the district, initiates programmes for the development of basic infrastructure, and provides municipal works and services in the district. **Standards Authority Act, 1973:** GSA sets the standards for drinking water quality, testing procedures, and equipment; it also promulgates national building codes and authorises the voluntary use of the 'Mark of Conformity' by packaged water producers (e.g., sachet vendors). **SIGA Act, 2019 (Act 990):** This provides the framework for performance monitoring of CWSA through performance contracts.
Policies

Legal and guiding documents for rural water supply
NWP (currently under revision as at 2021): Provides the framework for the sustainable development of Ghana's water resources. The focus on rural water supply is to professionalise rural water service delivery and to transform CWSA into a utility. **CWSA Policy (currently under revision as at 2021):** Sets out CWSA's ambition to professionalise piped water schemes for the rural sector and to convert CWSA into a water utility. CWSA proposes to be the asset owner and manager for small town water supply services.
Strategies, frameworks, and plans
The National Community Water and Sanitation Programme: Provides the framework for increasing effective and sustained use of community water supply and improved related sanitation services in rural communities and small towns. The programme was developed within the framework of Ghana's decentralisation programme and the NWP. **The National Community Water and Sanitation Strategy 2014:** Provides the framework for the implementation of the National Community Water and Sanitation Programme by setting out the strategy for achieving the government's vision for the sub-sector, as outlined in the WSSDP: 'all people living in Ghana have access to adequate, safe, affordable, reliable and sustainable water supply and improved sanitation and hygiene practices'. **National Drinking Water Quality Monitoring Framework:** Outlines the management of drinking water quality, which includes the systematic identification of risks, the preparation and implementation of Water Safety Plans, effective monitoring and evaluation, and regulation and coordination of the roles and responsibilities of all actors. **CWSA SIP 2021–2024:** Details CWSA's plan to move from 62% to 70% rural water coverage over the period.
Manuals, guidelines, and studies
District Operational Manual (Volume 1 – CWSA 2014): Provides the framework for decentralised WASH services coordination and delivery, infrastructure asset management, planning, financial administration, and the information management system. **How-to-do-guide on functionality and service monitoring (CWSA 2014):** Provides the framework for service monitoring in the community and small-town water sub-sector. It guides stakeholders on providing the real-time information required for planning, budgeting, resource allocation, and remedial actions. **Project Implementation Manual – CWSA 2014:** Provides guidance and direction on project planning, implementation, monitoring, and reporting. The manual covers the project cycle for effective sustainable WASH services. Sector guidelines: General (Rural Communities and Small Town) Vol I, 2010: Provides guidance on tariffs for community water services.
Regulatory instruments
GS 175: Water Quality: Provides the specifications for drinking water. **GS 220: Water Quality:** Provides the specifications for natural mineral water (packaged water – sachet and bottled water). **GS 786: Code of Hygienic Practices for the Collection, Processing and Marketing of Potable Water:** Recommends appropriate general techniques for collecting potable water, its treatment, bottling, packaging, storage, transport, distribution and sale for direct consumption, so as to guarantee a safe, healthy and wholesome product.

A.4 Sanitation

Table 58: Key policy, legal, and regulatory documents for sanitation sub-sector

Legal and guiding documents for sanitation
Legislation
Local Governance Act 936 (2016): Provides the legal and institutional framework for local governance in accordance with the Ghanaian Constitution. It establishes the Local Government Service, the National Development Planning System, and the administration of the DA System, including issues on the Common Fund, physical planning and development, and all activities within the jurisdiction of local authorities. **EPA Act 490 (1994):** Defines the core statutory mandate of advisory, regulatory, and enforcement of laws pertaining to environmental management in Ghana. The act empowers the responsible ministry (with advice from the agency) to formulate relevant regulations to guide the implementation of their mandate.
Policies
ESP (planned for revision in 2021): Provides a framework for the sustainable development of the sanitation sector, with a nationally accepted vision of environmental sanitation as an essential social service for improving health and the quality of life in Ghana. The policy covers all aspects of environmental sanitation, including solid waste, liquid waste, excreta, industrial waste, healthcare, and other hazardous wastes. **National Health Policy: Ensuring Healthy Lives for All (Revised Edition 2020):** Seeks to promote, restore, and maintain good health for all people living in Ghana through improved alignment, complementarity, and synergies within and across all sectors. Key strategies **include 'improving access to potable water, sanitation hygiene'.**

Legal and guiding documents for sanitation
Strategies, frameworks, and plans
Agenda for Jobs: Creating Prosperity and Equal Opportunity for All 2018–2021: Provides the three broad policy objectives that are relevant to the WASH sector, aligned to the SDG 6 targets. The broad policy objectives on sanitation are (1) to enhance access to improved and reliable environmental sanitation services; and (2) to promote efficient and sustainable waste management. **WSSDP 2015–2025:** Sets out the framework for achieving the vision of 'sustainable water and basic sanitation for all by 2025'. Its goal is achieving increased access to and use of safe water, sanitation, and hygiene, and sustainable management of water resources through adoption of **IWRM** plans, **the urban water supply strategy, and the rural water supply and sanitation strategy.** **NESSAP 2010:** Provides clear strategies and action plans to guide the implementation of behaviour change on all types of waste – both liquid and solid. It adopts the philosophy that materials are in transition (MINT): waste is a material resource which is not to be discarded, rather value should be added on at various stages of production and consumption cycles. NESSAP also recognises that communal and public facilities will continue to play a critical role in environmental sanitation, and it recognises the private sector as a key partner in service delivery. **SESIP 2010:** Provides a financing plan for implementing the NESSAP. Proposes an increase in the annual allocation of the DACF to MMDAs to fund their financing gaps (from 7.5% to 15%) and proposes 'ring-fencing' the amount for environmental sanitation (including solid waste) programmes. The strategy proposes the establishment of a national revolving fund for household sanitation, to be managed by microfinance institutions.
Strategies, frameworks, and plans
WASH Behaviour Change Communication Strategy for the Urban Sub-Sector, Ghana (2011): Provides the behaviour change strategy for standard implementation of interventions and service delivery by different stakeholders working in the WASH sector. **Rural Sanitation Model Strategy (RSMS) and Costed Scaling-Up Strategy (2011):** Provides support for CLTS and defines CLTS limitations, such as sanitation marketing gaps. It provides the strategy for sanitation marketing modelling with the private sector (producers and suppliers), and mobilising finance (rural bank credit lines) with creative and persuasive communication media.

Legal and guiding documents for sanitation

Manuals, guidelines, and studies

Guideline for Targeting the Poor and Vulnerable for Basic Sanitation Services in Ghana (2018): Provides guidance on improving health, dignity, and the quality of life for all people through achieving 100% ODF status and equitable and adequate access to sanitation and hygiene for all by 2030, with special emphasis on the poor and vulnerable. It provides the direction for stakeholders in the sanitation and hygiene sector in regard to harmonising collective action, purpose, and efforts in attaining the SDG targets on sanitation and hygiene.

Environmental Sanitation and Drainage manual (Volume III) – Liquid Waste (Faecal Sludge) – 2nd Revision, May 2020: Has been prepared to guide future design of FSM systems in GAMA, taking into account the 30-year Integrated Urban Environmental Sanitation Master Plan.

Expanded Sanitary Inspections, Compliance Management and Enforcement Manual: Is used by the Environmental Health and Sanitation Departments/EHUs of MMDAs for sanitary inspections of all premises and facilities within their jurisdiction. The inspections cover healthcare facilities, hospitality industries, industrial facilities, market and lorry terminals, residential premises, eating and drinking premises, and sanitary facilities. The electronic version of the manual is ESICApp, which aids evidence-based inspection and reporting (it has yet to be rolled out nationwide).

Regulatory instruments

Environmental Assessment Regulation LI 1652 (1999): A legal planning and decision-making tool used by the EPA to apply to proposed developmental projects and activities to assess the level of significance of the environmental and social impact that the project may exert on the society and environment.

GS 1207: 2018 Ghana Building Code: Stipulates that all dwellings must have safe water and sanitation facilities on the premises.

Ghana Building Regulation (Legislative Instrument) LI 1630: Gives the local development authority the power to regulate physical infrastructural development. The LI presents all the requirements necessary for issuing building permits. It defines the application processes, sanitary convenience provisions, waste management, drainage, and other utility provisions and installations in both urban and rural settings in Ghana.

MMDA bylaws: Under the Local Governance **Act 936 (2016), MMDAs make** relevant bylaws for regulating environmental sanitation and related services, including building and physical developments. Developing and enforcing bylaws is the sole responsibility of individual MMDAs, with the support of RCCs.

Table 59: Policy and legal framework for SWM

Legal and guiding documents for SWM
Legislation
Hazardous and Electronic Waste Control and Management Act (Act 917) (2016): Prescribes the control, management, and disposal of hazardous waste, electrical and electronic waste (e-waste). It also presents the legal framework for the establishment of an e-waste levy, an e-waste management fund, e-waste recycling plants, and other facilities including disposal, and enforcement and obligations. Ghana PPP Bill (2013): Provides the legal framework and institutional arrangements for the development, implementation, and regulation of PPP arrangements between contracting authorities and private parties for the provision of infrastructure and services. Public Health Act (Act 851) (2012): Consolidates the laws relating to public health safety by the prevention of diseases through the promotion, safeguarding, maintenance, and protection of the health of humans and animals in communities. On environmental sanitation, the focus is on SWM: it describes as an offence any unsanitary handling of carrion, filth, dirt, refuse, or rubbish such that it creates a public nuisance. Environmental Tax – ACT, 2013 (ACT 863) (Customs and Excise (Duties and Other Taxes) Amendment): Covers the environmental excise tax on plastic and plastic products and establishes the Plastic Waste Recycling Fund, which is dedicated to the recycling of plastic waste and the production of plastic waste bins and bags and the production and use of biodegradable plastics.
Policies
National ESP (planned for revision in 2021): Provides a framework for the sustainable development of the sanitation sector. It is guided by the polluter pays principle and cost recovery to ensure value for money for effective and efficient solid waste service delivery. **National Policy on PPPs (2011):** Provides a framework for the provision of public infrastructure and services, including environmental sanitation functions which involve SWM, through increased private sector participation (PPPs). **National Plastics Management Policy (2018):** Seeks to address challenges associated with plastics waste management for improved environmental and public health by prescribing strategic actions to solve the plastic waste menace.

Legal and guiding documents for SWM
Strategies, frameworks, and plans
SWM Strategy (2020): Seeks to deliver progressive, high-quality, and cost-effective SWM service delivery centred on seven interdependent action pillars. Notable among them is increasing private sector participation, resource recovery, and sustainable financing. **NESSAP (2010):** Provides clear strategies and action plans for changing the perception and behaviour of Ghanaians on all types of waste – both liquid and solid – using the philosophy of materials in transition (MINT): i.e. that waste is a material resource which is not to be discarded but rather value is to be added on at various stages while it is in transition within the production and consumption cycles. **SESIP (2011):** Provides an investment plan and proposes an increase in the annual allocation of the DACF to MMDAs to fund their financing gaps (from 7.5% to 15%) and provides for ring-fencing the amount for environmental sanitation (including solid waste) programmes.
Manuals, guidelines, and studies
Ghana Landfill Guidelines (2002): Provide guidelines for issuing permits for landfill operations in **the country**. The guidelines also provide adequate and practical information to enable applicants, licence-holders, and their designated advisers and managers to comply with the policy of the District Waste Management Departments and related legislative requirements.
Regulation
Criminal Offences Code (Amendment) Act 646 (2003): Provides the **relevant** laws for **environmental sanitation** and related **nuisances** and defines offences relating to the irresponsible handling of rubbish or waste – especially haphazard disposal (such as throwing waste onto streets and abandoning the same on premises). Such inappropriate behaviours are considered criminal offences that can be pursued in court by law enforcement personnel. **Land Use and Spatial Planning Act, 2016 (Act 925):** Empowers MMDAs to regulate physical infrastructure: i.e., it provides for the sustainable development of lands and human settlement through a decentralised planning system and ensures judicious use of land in order to improve quality of life, and to promote health and safety. In respect of human settlements and to regulate national, regional, district, and local spatial planning, and generally to provide for spatial aspects of socioeconomic development and other related matters.

A.5 Hygiene – handwashing

Table 60: Policies and strategies on handwashing

Legal and guiding documents for handwashing with soap
Policies
ESP (planned for revision in 2021): Provides a framework that ensures hygiene education is included in WASH programmes for enhanced awareness sensitisation, and the maintenance of clean, safe, and pleasant physical environments in communities. **National Policy and Guidelines for Infection Prevention and Control in Healthcare Settings (2015):** Provides standard hygiene and handwashing protocols for the prevention of infectious disease transmission in healthcare facilities.
Strategies, frameworks, and plans
National Environmental Sanitation Action Plan (2010): Acknowledges that awareness-raising through hygiene education and the enforcement of regulations for improving sanitation behaviour are critical aspects of improving and maintaining public health in Ghana. It also provides a framework that ensures that handwashing with soap initiatives is integrated into CLTS and school sanitation and hygiene education programmes. RSMS (2011): It provides an enabling environment for districts to plan, facilitate, support, and monitor at scale sanitation and hygiene improvement programmes. **WASH Behavioural Change Communication Strategy for the Urban Sub-Sector (2011):** It provides a general framework for the development of messages that will flow logically from the stated behaviour change objectives and the desired changes at the level of each target group, taking fully into account its knowledge, attitudes, and practices with regard to WASH.
Manuals, guidelines, and studies
Expanded Sanitary Inspections, Compliance Management and Enforcement Manual: The manual guides MMDAs in sanitary inspections of all premises and facilities within their jurisdiction. The inspections include handwashing facilities in settings like healthcare facilities, hospitality industries, industrial facilities, market and lorry terminals, residential premises, eating and drinking premises, and sanitary facilities. The electronic version of the manual is ESICApp, which was tested under the GAMA Project but has yet to be rolled out nationwide.

Table 61: Key legislation, policies, strategies, manuals, and guidelines on faeces disposal

Legal and guiding documents for safe disposal of faeces
Legislation
Public Health Act (Act 851) (2012): Ensures public health safety by the prevention of diseases. For environmental sanitation, it defines offences relating to unsanitary handling of carrion, filth, dirt, refuse or rubbish – and by extension faecal matter – as creating a public nuisance. **Local Governance Act 936 (2016):** Empowers MMDAs to make sanitation (draining and sanitation) and related bylaws, which includes the enforcement of safe disposal of faeces.
Policies
National ESP (planned for revision in 2021): Provides a framework for sustainable sanitation service delivery, including safe disposal of faeces and improved hygiene through attitudinal and behavioural change.
Strategies, frameworks, and plans
National Environmental Sanitation Action Plan: Seeks to achieve incremental improvements for all aspects of environmental sanitation that can be measured and tracked, towards the Government of Ghana's vision of achieving middle-income status by 2020. **RSMS:** Was developed to eliminate the practice of open defecation and to promote the use of improved latrines through the use of innovative behavioural changes – sanitation marketing, creative and persuasive communication media, and the involvement of the private sector.

Table 62: Strategies on HWTS

Legal and guiding documents for HWTS
Strategies, frameworks, and plans
WSSDP: Provides the framework for achieving the 2025 vision of sustainable water and basic sanitation for all. Under the plan, CWSA is to facilitate the implementation of the rural component of programmes, including the National Household Water Treatment and Safe Storage Strategy, which adopts HWTS approaches to reduce waterborne diseases – especially among populations without access to safe drinking water.
Strategies, frameworks, and plans

Legal and guiding documents for HWTS
National Strategy for Household Water Treatment and Safe Storage in Ghana (2014): Provides guidance for all sector players involved in HWTS in settings including homes, schools, healthcare facilities, and other community locations. The strategy focuses on improving hygiene by ensuring that drinking water is safe at the point of consumption at all times. The scope includes water from small-scale vendors, the promotion of key behaviours and practices associated with water quality at the point of use, and the adoption of appropriate technologies. **National Drinking Water Quality Management Framework (2015):** A risk-based approach in the management of drinking water quality through the identification of risks, the implementation of Water Safety Plans, effective monitoring and evaluation, and the regulation and coordination of the roles and responsibilities of all relevant actors. The last mile is HWTS.
Manuals, guidelines, and studies
Scaling up Household Water Treatment and Safe Storage in Ghana Report (Jeske Verhoeven, 2018): Outlines initial attempts made concerning setting up a regulatory framework in Ghana for HWTS, especially among key stakeholders like the GSA, FDA, the University of Cape Coast, the WRC, and MLGDRD (Water and Sanitation Directorates). This initiative needs to be revisited to develop final conclusions, including by clarifying the regulatory mandate for HWTS, including product/technology issues (safety, performance, certification, testing, labelling etc. standards).

A.6 WASH in institutions

This cover schools and healthcare facilities.

Table 63: Policy, legal, and regulatory framework for WinS

Legal and guiding documents for WinS
Legislation
Education Act 778 (2008): Established the GES and provides the educational system framework for national development. The act defines District Education Oversight Committees (DEOCs), which have several oversight responsibilities, including on the conditions of school buildings and other infrastructural requirements of schools, environmental cleanliness and lands, and any other facilities including WASH. DEOCs are responsible for provisions of School facilities, and for O&M of WASH facilities in schools. **Education Bill, 2015:** Provides a more decentralised pre-tertiary education system, and promotes the creation of SMCs at the school level to report to the DEOC. The several functions of SMCs include advising the DEOC on the conditions of school buildings and any other infrastructural requirements of schools, including WASH and any other facilities. The MMDAs are responsible for the construction of, the provision of equipment for, and the maintenance of public basic schools.

Legal and guiding documents for WinS
Strategies, frameworks, and plans
Education Strategic Plan (2018 – 2030): Its focus is to improve the quality of education for all in Ghana. It adopts the principles of improving equitable access to quality education by addressing challenges, including the poor state of school infrastructure (such as water and sanitation facilities at all levels of basic education) – especially in disadvantaged communities. It also provides a monitoring and evaluation framework, with indicators on SDGs for WinS.
Manuals, guidelines, and studies
WinS National Implementation Model (2014): Improves coordination and harmonisation in the sub-sector and sets standards to ensure the provision of safe drinking water, sanitary facilities, and the establishment of appropriate hygiene habits. Also defines the roles of school clubs and children in CLTS and other key stakeholders for WinS. WinS Checklists (2014): Present checklists to be used together with WinS guidelines to help clearly identify tasks and responsibilities for school authorities and other stakeholders at different times and for various activities. For instance, there are checklists for selection and location, school toilet types, design and construction of water supply and sanitation facilities, O&M plans, hygiene promotion and handwashing, SWM, and compound cleaning, etc. **WinS Education Guide (2014):** Supports the implementation of the Child-Friendly Schools Framework developed by GES to promote WASH education in schools, including hygiene education topics already integrated into the education curriculum in Ghana. Defines year-round school-level activities to be undertaken in every school, including activities in the classroom, in the main school hall during worship/assembly times, WASH notice boards, school health clubs, parent–teacher association/SMC meetings, etc. WinS Facilities Planning and Management Guide (2014): Defines the roles and responsibilities of key stakeholders involved in WinS at all levels in planning, the selection of feasible WASH options, design, construction, and O&M of school WASH facilities for long-term sustainability. Provisions are made for the engagement of private entities in school toilet management, and the sources of funding for such arrangement (vendors and contributions from SMCs and parent–teacher associations). **Technical Guide for WinS Facilities (2014):** Provides technical standards for the provision of school WASH facilities in Ghana by defining the basic and minimum facilities and requirements for safe toilets, handwashing, and water supply in line with SHEP of the GES. Defines the involvement of key stakeholders and the processes for the selection, design, construction, and O&M of school WASH facilities. **GES – Best Schools Checklist (2014):** This is a checklist for the assessment of the overall WASH status of individual schools in Ghana. The comprehensive assessment sheet/form is used to gather information on the school (demographic data/profile) and the scope of WASH – behavioural transformation, environmental sanitation improvement, sanitation and hygiene facilities O&M, and total elimination of open defecation. **GES – MHM Guidelines (2020):** Their aim is to support MHM programming and implementation in schools. The guidelines complement other guides on WinS programming and cover areas such as information and knowledge, access to WASH facilities, access to hygienic absorbent materials, management of pain and discomfort, menstrual hygiene counselling, family and community support, and MHM for girls with disability and for girls who are out of school.

Table 64: WASH in healthcare facilities institutional framework

Legal and guiding documents for WASH in healthcare facilities
Legislation
Health Institutions and Facilities Act, 2011 (Act 829): Established HeFRA to license facilities for the provision of public and private healthcare services. The licensing and monitoring requirements of HeFRA involve the provision of adequate water supply, toilets, bath and handwashing facilities in premises, as well as the provision of signage for hygiene and sanitation facilities and services.
Policies
National Community-Based Health Planning and Services (CHPS) Policy (2016): CHPS is the national mechanism for bridging the inequity gap in health services delivery in Ghana, with the aim of accelerating the attainment of universal health coverage. It addresses infrastructure and equipment needs through the provision that every CHPS compound located in deprived areas without safe water shall have boreholes, and that the services offered by CHPS compounds should include health education, sanitation, and counselling on healthy lifestyles. **National Health Policy: Ensuring Healthy Lives for All (Revised Edition 2020):** Provides the framework for ensuring healthy lives for all people living in Ghana through multi-sectoral collaboration, strategic partnerships, decentralisation, equity, and citizens' involvement and social accountability. Among the policy objectives is the commitment to improve the physical environment and healthcare facilities and equipment, but there is no explicit reference to WASH in healthcare facilities. **Occupational Health and Safety Policy and Guidelines for the Health Sector (2010):** Endorses the Labour Act 2003 (Act 651) provisions that the employer must provide separate, sufficient, and suitable toilet and washing facilities and adequate facilities for storage, changing, drying, and cleansing from contamination of clothing for male and female workers, and that they must also provide an adequate supply of clean drinking water at the workplace.
Strategies, frameworks, and plans
Ministry of Works and Housing Sector MTDPs (2018–2021): Set out key policy objectives and strategies, include enhancing the quality of life in rural areas by providing basic infrastructure, including potable water, sanitation, schools, and health facilities.

Annex B Implementation plan

Thematic Area	Proposed strategy	Indicative Activity	Total Cost (US$m)	Recur-rent (US$m)	Capital (USA$m)	21
Water Resources Management	(1) Redress deterorating water quality	(i) Increase number of monitoring stations	3.00	3.00	0.00	0.30
		(ii) Establish Legislative Instruments (LIs) from the Buffer Zone Policy	0.20	0.20	0.00	0.20
		(iii) Enhanc public awareness and education in water resource management issues	2.00	2.00	0.00	0.20
	(2) Improve integration between IWRM and WASH services	(i) Formalise bi-annual meetings between WRC, GWCL and CWSA for planning catchment manage-ment and water supply	2.00	2.00	0.00	0.20
	(3) Reduce the impact of climate variability on water and other natural resources	(i) Mainstream climate resilience in WRC, CWSA and GWCL, EHSD activities	1.00	1.00	0.00	0.10
	(4) Strengthen Water Resources Management at the District Level	(i) Effective enforcement of laws and policies at all levels	1.40	1.20	0.20	0.10
		(ii) Implement the sub-basin boards to effectively manage the water resources and build capacity of MMDAs to support water resources management	3.00	3.00	0.00	0.30
	(5) Enhance protection of transboundary rivers	(i) Enhance trans-boundary and international cooper-ation in the managemnet of shared water resources and establish body for Tono and Bia Basin	2.00	2.00	0.00	0.20
	(6)Build capacity to monitoring water resource management	(i) Increase staff at WRC according to the require-ments	5.00	5.00	0.00	0.50
	(7) Increase monitoring of groundwater resources	(i) Setup adequate monitoring points for all River Basins and Aquifers in Ghana	12.00	5.00	7.00	4.50
		(ii) Provide adequate support for water studies, data collection and other related activities	34.00	10.00	24.00	2.00
	(8) Review IWRM Plans for basins and National	(i) Review national and Basin IWRM Plans and set up basin boards where applicable.	15.00	15.00	0.00	1.50

Time Frame									Source of Funding (US$million)			
2022 - 2025				2026 - 2030								
22	23	24	25	26	27	28	29	30	DP	MMDAs	Commu-nities	GoG
0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30				3.00
0.20												0.20
0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20				2.00
0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20				2.00
0.10	0.10	0.10	0.10	0.10	0.10	0.01	0.10	0.10				1.00
0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10		0.03		1.37
0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30				3.00
0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20				2.00
0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50				5.00
3.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50				12.00
12.00	12.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00				34.00
1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50				15.00

Thematic Area	Proposed strategy	Indicative Activity	Total Cost (US$m)	Recur-rent (US$m)	Capital (USA$m)	21
Urban Water Service	(1) Improve access to water supply service in low income and peri urban B25com-munities	(i) Institutionalise MMDA wide planning through collaboration between GWCL and MMDAs to improve service in these areas (low income and peri urban areas)	24.00	24.00	0.00	6.00
		(ii) Strengthen LICSU and roll out in other regions	4.00	4.00	0.00	0.40
		(iii) Subsidise new service connection from the poor	20.00	20.00	0.00	2.00
	(2) Improve water production and distribution system	(i) Prepare a Sector Investment Plan for urban water and ensure sustainable financing of the sector	1.00	1.00	0.00	1.00
		(ii) Rehabilitation, upgrading and exoansion of all 82 systems especially the distribution system	3,580.0	0.0	3.580.0	250.0
		(iii) Prepare and implement Water Safety Plans for all urban water systems	3.40	3.40	0.00	2.50
		(iv) Allocation for water service delivery in emergen-cies	10.00	10.00	0.00	1.00
	(3) Implement measures to reduce non revenue water	(i) Installation of bulk meters on all urban water systems	0.00	0.00	0.00	5.00
		(ii) Installation of zonal meters and customer meters for consumers on flat rate	60.00	60.00	0.00	7.00
		(iii) Establish DMA and water loss reduction pro-grammes	33.00	33.00	0.00	2.00
		(iv) Establish aditional districts offices of GWCL	16.00	16.00	0.00	1.00

Time Frame									Source of Funding (US$million)			
2022 - 2025				2026 - 2030								
22	23	24	25	26	27	28	29	30	DP	MMDAs	Commu-nities	GoG
0.00	0.00	6.00	0.00	0.00	6.00	0.00	6.00	0.00				24.00
0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40				0.40
2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00				20.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00				1.00
370.0	370.0	370.0	370.0	370.0	370.0	370.0	370.0	370.0	2000.0	0.0	0.0	1,580.0
0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10				3.40
1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				10.00
5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00				50.00
7.00	7.00	7.00	7.00	5.00	5.00	5.00	5.00	5.00				60.00
5.00	5.00	5.00	5.00	3.00	2.00	2.00	5.00	5.00				33.00
5.00	5.00	5.00	0.00	0.00	0.00	0.00	0.00	0.00				16.00

Thematic Area	Proposed strategy	Indicative Activity	Total Cost (US$m)	Recur-rent (US$m)	Capital (USA$m)	21
Rural & Small Towns Water Service	(1) Provice new water facilities in under served and unserved rural areas and small towns	(i) Institutionalise MMDA wide water supply planning through collaboration between CWSA and MMDAs to improve service to all	20.00	20.00	0.00	2.00
		(ii) Strengthen water planning, budgetting, monitoring and perfomance reporting at MMDAlevel	0.40	10.00	0.00	1.00
		(iii) Provision of water facilities and accompanying software activities to meet demand betwenn 2015 and 2025	2,350.00	0.00	2,250.00	100.00
	(2)Institute appropraite mechanism for rehabilitation of exixsting facilities	(i)Mainstream asset management planning to inform planning on replacement /major rehabilitation of water faciliies	10.00	10.00	0.00	1.00
		(ii) Major rehabilitation and replacement of rural and small towns water faciliies	330.00	0.00	330.00	15.00
		(iii) Establish MMDAs monitoring platforms for per-formance assessment, monitoring and reporting	5.00	5.00	0.00	1.00
		(iv) Establish and resource MOM units in all regions	10.00	10.00	0.00	1.00
	(3) Develop and operational-ise a nationwide water safty palnning	(i) Develop and implement a water safty planinning in line with the national drinking water management framework	10.00	10.00	0.00	1.00

Time Frame									Source of Funding (US$million)			
2022 - 2025				2026 - 2030								
22	23	24	25	26	27	28	29	30	DP	MMDAs	Commu-nities	GoG
2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00				20.00
1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.22			0.18
250.00	250.00	250.00	250.00	250.00	250.00	250.0	250.00	250.00	1,350.00			1,000.00
1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	10.00			10.00
35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00		200.00		130.00
1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				5.00
1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				10.00
1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				10.00

Thematic Area	Proposed strategy	Indicative Activity	Total Cost (US$m)	Recur-rent (US$m)	Capital (USA$m)	21
Sanitation Service	Promote safe sanitation among all people;	(i) Implementation of national Rural Sanitation Model & Scaling Up Strategy (CLTS):	1,000.00	200.00	800.00	100.00
		(ii) Implementation of urban sanitation	5,500.00	500.00	5,000.00	550.00
		(iii) FSM - preparing master plan and construction of faciliies with asset management plan	1,500.00	100.00	1,400.00	150.00
Hygiene Service	Promote safe hygiene practices among all people;	(i)Intensify implementation of framework for PPP on hand washing with soap	50.0	50.00	0.00	5.00
		(ii) Monitor implementation of PPP framework on handwashing with soap at community and DA level.	10.00	10.00	0.00	1.001.00
		(iii) Implementation of national household water treatment and safe storage strategy	40.00	40.00	0.00	4.00
		(iv) Design and implementation framework fro MHM in school and communities	10.00	10.00	0.00	1.00
Institutional Development and Sector Strengthening		(i) Strengthen alignment of sector and institutional perfomance with national, goals, targets and badgets	10.00	10.00	0.00	1.00
		(ii) Strengthen capacities and capabilities in MSWR, especially the Directorate of PPBME, for sector coor-dination, harminisation, monitoring and evaluation, and policy formation	30.00	30.00	0.00	30.00
		(iii) Finalisation and implementation of Sector Infor-mation System	20.00	20.00	0.00	2.00
		US$	**8,170.00**	**970.00**	**7,200.00**	**817**
		GHC	**47,386.00**	**5,626.00**	**41,760.00**	**4,739**
		AVERAGE $	**817.00**	**97.00**	**720.00**	
		AVERAGE GHC	**4,738.60**	**562.60**	**4,176.00**	
		%		**11.87**	**88.13**	

Time Frame									Source of Funding (US$million)			
2022 - 2025				2026 - 2030								
22	23	24	25	26	27	28	29	30	DP	MMDAs	Commu-nities	GoG
100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	200.00	100.00	600.00	100.00
550.00	550.00	550.00	550.00	550.00	550.00	550.00	550.00	550.00	1,000.00	300.00	3,700.00	2,000.00
150.00	150.00	150.00	150.00	150.00	150.00	150.00	150.00	150.00	500.00	50.00	0.00	950.00
5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	10.00			40.00
1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	5.00	1.00	3.00	1.00
4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	5.00	10.00	10.00	15.00
1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00			10.00
1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				10.00
3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00				30.00
2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00				20.00
917	**817**	**817**	**817**	**817**	**817**	**817**	**817**	**817**	**1,720.00**	**461.00**	**4,313.00**	**3,176.00**
4,739,	**4,739**	**4,739**	**4,739**	**4,739**	**4,739**	**4,739**	**4,739**	**4,739**	**9,976.00**	**2,673.80**	**25,015.40**	**18,420.80**
									172.00	**46.10**	**431.30**	**317.60**
									997.60	**267.40**	**2,501.50**	**1,842.10**
									18%	**5%**	**45%**	**33%**

Annex C
Guidelines for WASH planning, monitoring, and reporting

Cover page
Table of contents
List of abbreviations and acronyms
List of figures and tables

Introduction (max 1 page)

Background information
Purpose of plan
Plan preparation process
Overview of the MMDA, vision/goal/targets for the plan period
WASH situation analysis and targets (max 1 page)

Water resources management

Water resources monitoring and assessment

a. Water for production facilities (types, capacity), functionality, etc.
b. Water resource planning and regulation
c. Water quality monitoring and assessment
d. International and transboundary water resources management
e. New basin and sub-basin boards

Water supply

a. Number of water supply systems/schemes
b. Conditions/functionality of existing water supply systems/schemes
c. Water supply coverage and service levels
d. Gender, equity, inclusion, and women's empowerment
e. Vulnerability and inclusiveness

Environmental sanitation (liquid and solid waste)

The existing situation on sanitation coverage:

a. No. of sanitation infrastructure (household toilets, institutional toilets, WWTPs, faecal sludge treatment, leachate management, landfill)
b. Condition of existing sanitation facilities (household toilets, institutional toilets, WWTPs, faecal sludge treatment, landfill) in rural/urban communities
c. Sanitation coverage and service levels
d. Sanitation situation: in schools, healthcare facilities, offices/workplaces, markets, lorry parks, etc.

Hygiene

a. The existing situation on the promotion of five hygiene practices (infection prevention and control in communities, workplaces, schools, healthcare facilities, and public spaces)
b. Handwashing with soap under potable running water
c. Safe and hygienic management/disposal of human excreta
d. Household water treatment and safe storage
e. MHM
f. Other context-specific hygiene behaviours, such as face-washing and waste management-related hygiene

WASH in institutions (schools, healthcare facilities) and public spaces (markets, etc.)

The existing situation on the following:

a. WinS

i. Water
ii. Sanitation
iii. Hygiene (handwashing, MHM, etc.)

b. WASH in healthcare facilities
   i. Water
   ii. Sanitation
   iii. Hygiene

c. WASH in public spaces (e.g., markets, lorry parks, offices/working places)

Sector strengthening

The existing situation on institutional development covers:

a. Capacity development programmes (including review of the curricula of Schools of Hygiene and the provision of infrastructure)
b. Sector planning development/templates/guidelines
c. MIS functionality
d. Sector learning platforms (e.g., routine sector meetings, annual review sessions, NLLAP, and joint reviews)
e. Asset management
f. Water safety planning
g. Manpower and logistics (e-libraries, laboratories, computers, transport, etc.) availability
h. Cross-sector collaboration
i. Research and development

Capacity development

- Human resources development plan (including training needs and financing)
- Provision of tools and logistics, such as computers, motorbikes, vehicles, etc.
- Other incentives

No	Key institutional challenges	Priority actions	Responsible agencies
1			
2			
3			
4			

Sector learning and knowledge management

- Routine sector meetings (monthly, quarterly, and annual)
- Annual review conference
- Joint reviews
- NLLAP

WASH targets (1/2 page)

The baseline and the proposed targets are shown in Table X below

			Year		
		Baseline	Year 1	Year 2	Year 3
Water resources management					
Water supply					
Environmental sanitation					
Hygiene					
WASH in institutions					
Institutional development					

WASH challenges and priority actions

SWOT analysis of WASH

Strengths	Weaknesses

Opportunities	Threats

Key challenges, and recommended priority actions to address them

Water resources management

No	Major water resources challenges	Priority actions	Timeframe	Responsible agencies
1				
2				
3				
4				

Water supply

No	Major water resources challenges	Priority actions	Timeframe	Responsible agencies
1				
2				
3				
4				

Sanitation – liquid waste

No	Major sanitation challenges	Priority actions	Responsible agencies
1			
2			
3			
4			

Sanitation – solid waste

No	Major sanitation challenges	Priority actions	Responsible agencies
1			
2			
3			
4			

Hygiene (handwashing with soap, MHM, etc.)

No	Major hygiene challenges	Priority actions	Timeframe	Responsible agencies
1				
2				
3				
4				

WASH in institutions and public spaces

No	Major hygiene challenges	Priority actions	Timeframe	Responsible agencies
1				
2				
3				
4				

WASH in emergencies and cross-cutting issues (climate change, gender, inclusiveness, communication)

State the situation and measures put in place to deal with each (as you find appropriate)

WASH implementation plan

No		Strategies/measures to achieve objectives	By whom	Time-frame	Cost (Ghana Cedi)
1	WRM	1			
		2			
		3			
		4			
2	Water supply	1			
		2			
		3			
		4			
3	Sanitation	1			
		2			
		3			
		4			
4	Hygiene	1			
		2			
		3			
		4			
5	Institutional development	1			
		2			
		3			
		4			

Cost and financing

Cost

		Timeframe				Cost					
Objec-tive	Strategies/ activities	Y1	Y2	Y3	Y4	GoG	IGF	DP	Lead	Private sector	Collaborat-ing

Financing

		Expected revenue							Gap	Mechanisms to fill	
Strategies/activities	Cost	GoG	IGF	DP	DACF						

The Ministry of Sanitation and Water Resources
Starlets 91 Road, Ministries; PMB 60, Ministries, Accra

www.mswr.gov.gh

Financed by:
The World Bank through the GAMA Sanitation and Water Project

THE WORLD BANK
IBRD • IDA | WORLD BANK GROUP

GAMA SANITATION AND WATER PROJECT