Studying the extent to which WASH needs are integrated into local plans in Ghana: A case study of two districts in Eastern Region.

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Gertrude Meng-ire Mongkuma

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Members of Examining Committee

Supervisor- Rodrigo Mena Fluhmann

Second Reader- Marijn Faling

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Disclaimer:

This document represents part of the author's study programme while at the Institute of Social Studies. The views stated therein are those of the author and not necessarily those of the Institute.

Inquiries:

Postal address: Institute of Social Studies
P.O. Box 29776
2502 LT The Hague
The Netherlands

Location: Kortenaerkade 12
2518 AX The Hague
The Netherlands

Telephone: +31 70 426 0460

Fax: +31 70 426 0799

Dedication

This research is dedicated in loving memory of my late Mum, Florence A. Mongkuma and my late sisters, Gladys, Grace and Genevieve Mongkuma

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Table of Contents

List of Tables

List of Figures

Acronyms

DPCU District Planning Coordination Unit

DCE District Chief Executive

DCD District Coordinating Director

DA District Assembly

DMTDP District Medium Term Development Plan

GWCL Ghana Water Company Limited

LMKMA Lower Manya Krobo Municipal Assembly

MDAs Ministries, Departments, and Agencies

MLGRD Ministry of Local Government and Rural Development

MMDAs Metropolitan, District and District Assemblies

MTDPF Medium -erm Development Policy Framework

NMTDPF National Medium-Term Development Policy Framework

NDPC National Development Planning Commission

PPP Public-Private Partnership

RCC Regional Coordination Council

RPCU Regional Planning and Coordinating Unit

RPM Rational Planning Model

SDGs Sustainable Development Goals

UMKDA Upper Manya Krobo Municipal Assembly

UN United Nations

WASH Water Sanitation and Hygiene

WHO World Health Organization

Abstract

Access to Safely managed Water, Sanitation and Hygiene (WASH) services are important for people's health, wellbeing and sustainable development. However, in many developing countries, access to these essential services is low. Planning at the local level play a significant role in ensuring that WASH needs are addressed effectively targeting specific WASH needs of the people. This study explores the integration of WASH needs into the 2022-2025 Medium Term Development Plans of Upper Manya Krobo District and Lower Manya Krobo Municipal of Ghana. Using a multi-method approach, combining Document review and Key Informant interviews, the study examined the extent to which WASH needs were incorporated into the local plans, identifying the factors influencing WASH integration, challenges and opportunities. The study identified key findings. The integration of WASH needs into the local plans varied from each district in term of the number of WASH activities captured in the local plans and the resources allocated and also resources were skewed towards hardware components compared to Software WASH activities. Factors such as community engagements and participation, national policies and global agendas such the Sustainable Development Goals influence WASH integration. Some of the challenges of integration uncovered include financial constraints, other resource and logistical constraints, technical capacity constraints and political interference while opportunities identified Promotion of Public-Private Partnerships, strengthening collaboration with Non-Governmental Organizations (NGOs) and active participation of community members. Further studies are needed in the area of the impact of WASH interventions in the research areas after the plan ends in 2025. Additionally, the research on the impact of NGOs and other development partners on sustainability of WASH projects and on gender and WASH integration are recommended.

Key words

Water Sanitation and Hygiene, Development plans, Integration, Local plans

Relevance to Development Studies

The UN General Assembly recognized access to Water, Sanitation and Hygiene (WASH) as a fundamental human right and as such, the Human Rights Council (HRC) consented to UN General Assembly's declaration and confirmed that "the human right to safe drinking water and sanitation is derived from the right to adequate standard of living [...]" (UN General Assembly, 2010, p.2). Although access to WASH services is a human right, disparities of access persist especially in rural areas. This study therefore provides a framework for addressing these inequalities, promoting social justice and inclusive development. Additionally, WASH progress is closely connected to the attainment of a number of interdependent Sustainable Development Goals such as eliminating poverty (SDG1) and hunger (SDG2), enhancing health and well-being (SDG3) and promotion of quality education (SDG4) and decreasing inequalities (SDG10) (Bain et al., 2018). The study therefore will help contribute to the monitoring of progress towards these goals and informing corrective measures This study can be utilized by WASH scholars and practitioners to better understand and adjust their agendas on the inclusiveness of WASH issues in development plans in Ghana and other countries facing WASH challenges.

Chapter One

1.0Introduction

Access to safely managed Water, Sanitation and Hygiene (WASH) services remains low in Ghana significantly impacting public health, children's education, productivity and the dignity of women. To improve access to WASH, integrating these important services into both national and local plans is critical. While the National plan outlines policy guidance, Local plans take this further by defining specific goals, objectives, targets, actionable projects to address local needs

This study examines the degree to which local plans in Ghana include WASH priorities, exploring the challenges and opportunities to better integrate these essential services.

1.2 Study Background

WASH services are critical for human wellbeing and development as it does not only prevent several illnesses but also contribute to sources of income, dignity, school attendance and building strong societies (Mills, 2016). Understanding WASH initiatives in the local development plans is crucial in achieving national and global targets on WASH which is important for addressing health, economic, social and environmental issues. According to studies conducted by Bartram and Cairncross (2010), improved WASH services could hinder about 9% of the global burden of disease and 6.3% of all deaths. In addition, improved access to WASH services relates to improved productivity, decreased healthcare expenses, and fewer missed workdays due to illness (Whittington et al., 2008). Several studies have indicated that the effects of access to safe water and sanitation have on the enhancement of quality of life, health and overall wellbeing of societies (Bartram and Cairncross, 2010; UNICEF-WHO, 2019). Hutton and Varughese (2016) denotes that, by investing $1 in water and sanitation, it can make economic returns ranging between $2 to $34, depending on the region and type of intervention. A number of studies (e.g., Fink et al., 2017; Freeman et al., 2017) have proven that improved WASH interventions in schools result in increased attendance rates, improved concentration and academic performance. Studies by Ahmed et al. (2022) also revealed a strong correlation between WASH interventions and different aspects of school performance such as school dropout rates, absenteeism and school attendance rates.

Again, multiple studies carried out in developing countries disclosed that WASH interventions lead to notable enhancement in educational performance particularly among female students (Freeman et al., 2012; Patel et al., 2012; Trinies et al., 2016b). UNICEF (2012) notes that, poor WASH facilities in educational institutions particularly affect girls, who often absent themselves during

their menstrual period due poor sanitation and hygiene facilities. Additionally, in most developing countries, women and girls carry the burden of fetching water, which can hinder their education and economic opportunities (UN Women, 2014). These findings highlight the importance WASH interventions play in promoting better learning environment and academic performance especially for females. Thus, improved access to water and sanitation can ease time problem on women and girls, enabling them to engage in learning, employment, and other prospects (Rosa et al., 2014).WASH interventions have influence in development in achieving intermediate and long-term socio-economic impacts that can be evaluated through various indicators such as job creation, rise in income and investment capital, reduction in healthcare cost and an overall improvement of health of people (Clasen and Laurence 2008; WSP-World Bank 2012; Darvesh et al., 2017). WASH interventions continue to play significant role in limiting the transmission of Covid-19 (Mushi, 2020). In the wake of Covid -19 pandemic, WASH interventions play critical role in reducing the risk infections and improving prevention and control of the virus.

In Ghana, even though 89% of the population have access to improve water sources as of 2017 (WHO and UNICEF, 2019), many people still fetch water from distant sources or face the risk of using contaminated sources (Ghana Statistical Service, 2018). This situation hinders access to safe and sufficient water for daily household use. Additionally, in rural and peri urban areas, a large proportion of the population still rely on unimproved sources of water exposing them to serious health risks (Dzakpasu et al., 2016). Safely managed sanitation access remains a major concern in Ghana. According to the WHO and UNICEF Joint Monitoring report programme, only 21% of the Ghanaian population had access to improved sanitation services in 2017 (WHO and UNICEF, 2019). Open defecation remains rampant in rural areas contributing to the transmission of illnesses and environmental pollution. This gets worse due to poor management of excreta from on-site sanitation system. Limited access to WASH services in Ghana is attributed to wide range of factors. Key factors include inadequate financial resources, weak governance and institutional capacity, climate change impacts, land depletion, traditional beliefs, and practices (UNICEF, 2018). To enhance access to safely managed WASH services, WASH Experts and Practitioners suggest boosting investment in WASH infrastructure, improving governance and institutional capacity, encouraging positive behavioral change, enhancing regulatory policies, improving resilience to environmental challenges, and fostering community-driven interventions (UNICEF, 2020; World Bank, 2018; JMP, 2019). Yet, these commendations are at risk of not being implemented if WASH priorities are not embedded within the local plans as it is required that projects/programmes from

the approved plans gets implemented (Local Governance Act, 2016 (Act 93) Section 12 (Subsection 4 b, c & d)

1.3 Problem Statement

Access to safely managed WASH services have been a global concern especially in developing countries such as Ghana. Globally, it is estimated that 20% of total mortality and Disability Adjusted Life Years in children under 14years is as a result of inadequate access to WASH services (Pruss-Ustun et al., 2019). This situation highlights the effects of WASH on the health of children and reiterates the need to improve access to these WASH services to reduce preventable diseases and deaths on the vulnerable populations.

According to Roser (2023), safely managed drinking water refers to water sources that suit three key indicators; it is acquired from an enhanced supply, available on site and reliably free from both fecal and chemical contamination. The importance of the quality of water sources is not only highlighted but also access to it and availability for users. Safely managed sanitation facility is denoted by its exclusive use by a single household and the exercise of safe methods of waste disposal for human waste, either through an on-site treatment or off-site management. Furthermore, a basic hand washing facility comprises of an apparatus that transports or regulates the flow of water facilitating convenient hand-washing with soap and water within household setting. In 2022, an estimate of 2.2 billion population world-wide lack access to safely managed water. This data includes 1.5 billion population who lack access to basic services (JMP, 2023). The Joint Monitoring Program report further highlights that an estimated number of people who do not have access to safely managed sanitation to be 3.4 billion and 2 billion people lacked basic hygiene services. These estimates underscore the need to improve access to WASH intervention worldwide to ensure the health and being of the globe.

The United Nations Sustainable Development Goals (SDGs) 6 seeks to "ensure availability and sustainable management of water and sanitation for all" by 2030. Target 6.1 of the goal further advocates for universal and equitable access to safe and affordable drinking water for all and 6.2 also seeks to achieve sufficient and just sanitation and hygiene for everyone. The localization of SDGs and targets requires each government not only to set its national targets that align with global aspirations, but acknowledge country specific contexts, resources and priorities (WHO/UNICEF, 2019). This process ensures that national goals and targets are appropriate, attainable, and attuned to the needs of each country while still contributing to the global agenda.

To speed up the implementation of the SDGs, it is critical for all national governments to incorporate these Global goals into their various plans and strategies (Katramiz, 2021). Therefore, effective WASH governance is essential at all levels from the global policy making stage to the local level implementation. A well-built governance system guarantees that WASH initiatives are given priority, well-coordinated and well resourced. The international level of WASH governance requires setting up global agendas, instituting standards and promoting exchange of knowledge and information. It is at this level the SDGs come into play. At the national level, governments play a significant role in developing policies, earmarking resources and ensuring equitable access to the citizens. Local level governance is crucial for involving local communities tailoring interventions such as WASH initiatives to local context and ensuring service delivery.

Ghana's, Local Governance System operates through a triple-tier system. Starting with Regional Coordinating Council at the top, next is Metropolitan/Municipal/District Assemblies (MMDAs) and ends with sub-district structures. Local planning is primarily carried out at the MMDA level where plans are prepared to harmonize with Ghana's National Development Plan. The 1992 constitution of Ghana established the National Development Planning Commission which is responsible for preparing national development plans that reflect government aspiration and guiding MMDAs in preparing localized Medium Term Development Plans (MDTPs). These MDTPs prepared every 4 years outlines vision, mission, major development issues, goals, projects and funds required for implementation. While these plans are adjustable, implementing activities that are not captured in the plans is challenging as changing it required a lot of bureaucratic processes. Under Ghana's decentralized planning system, the National Development Goals cannot be met if local plans do not incorporate and address these priorities. Similarly, specific district challenges such as poor access to WASH may fester if not adequately captured in the local plans.

Despite the regular preparation and implementation of MTDPs, access to safely managed WASH services remains inadequate across the country. The WHO & UNICEF Joint Monitoring Programme approximated that as of 2022, only 44% Ghanaian had access to safely managed water services leaving 55.5% with various levels. Limited access is 43.9% with basic access, 5.9% with limited access, and 5.7% depending on unimproved sources (WHO & UNICEF Joint Monitoring Programme, 2022). In the area of sanitation, only 15.8% had safely managed service while the remaining population had varying levels of service: 12.7% had basic access, 44.5% limited access, 9.7% used unimproved facilities and 17.2% still engaged in open defecation (ibid). The limited access to WASH services has negative impact on the public health. For example,

WHO reckons that every day, 21 people in Ghana contract WASH related illnesses with one life lost every hour from these diseases (United Nations, 2023).

Section 8(1) of Ghana's National Development Planning (Systems) Regulations (L.I 2232) of 2016 states that "a district planning authority shall implement the approved development plan through the preparation of an annual action plan". This implies that the annual action plan serves as a road-map for the executing of the District Medium Term Development Plan outlining priority projects, programs and interventions that would be implemented along with resource allocations and timeframes. To effectively expand on WASH interventions, the key initial step is to incorporate them in the local plans. Even where local authorities lack resources to deliver these services directly, a clear policy direction on WASH planning can draw interest and investments from NGOs and Private Sector.

The study can be examined from the lens of human rights perspective, economic and legal perspectives. All these angles are important parts of a wider WASH integration issue; however, this research focuses on the legal angle, drawing attention to the legal obligations and elements that ensure WASH needs are incorporated into the local plans delving into existing policies and regulations that promote WASH access. By focusing on the legal aspects of WASH integration into local plans in Ghana, it is critical for the following reasons. The right to WASH services is acknowledged as a fundamental human right (UN, 2010). Ghana as a signatory has a legal requirement to respect, protect, fulfill and upheld these rights. Studying and thorough analysis of the existing legal lenses can disclose the gaps, inconsistencies or obstacles that may hinder WASH access in Ghana. By studying the extent to which WASH needs are integrated into development plans, the research examines whether the policy framework translated to local level plans adequately gives priority and allocates sufficient resources to address WASH needs of the population. Understanding this integration is important for identifying areas that require improvement and ensuring that development efforts are holistic and sustainable.

1.4 **Research Question**

To address the research problem depicted above, this research will focus on the WASH initiatives in the development plans in two districts/municipalities in the eastern Region of Ghana. The main guiding question to this research is, therefore:

What are the main challenges and opportunities of integrating safely managed WASH practices in the development plans of Lower Manya Krobo Municipal and Upper Manya District?

The following sub-questions would guide in unraveling the research question and they include,

1. What are the WASH challenges addressed in the development plans of the districts/municipalities?
2. How well do the local development plans of the selected Districts/Municipalities address the various WASH dimensions through their goals, objectives, strategies, projects and programmes?
3. What are the factors influencing the integration of WASH issues in the local plans
4. What are the implementation strategies for WASH interventions?
5. what funds are allocated for WASH interventions in the local plans of the districts/municipalities?

1.6 Organisation of the Study

The research paper is structured into five parts. Chapter one provides introduction and background of study, relevance and justification, and research questions. Chapter two discusses conceptual framework and related literature of the research problem. Chapter three discusses methodology used for the research. Chapter four discusses research findings and detailed analysis if the findings. Chapter five provides summary of findings, recommendation area for further research and conclusion of the study.

Chapter 2

Theories and conceptual frameworks

2.0 Introduction

WASH services are significant part of public health and sustainable development. Developing countries such as Ghana still lag despite global substantial efforts and improvement in WASH infrastructure. In Ghana, efforts have been made to augment WASH services, nevertheless there are critical challenges especially in rural areas of the country. In providing understanding of WASH integration, the study adopts different approaches bringing into play various theoretical perspectives. This chapter outlines the main theories employed in the theoretical framework and discusses how WASH is conceptualized within the study. There are various theories, models and frameworks such as Policy Cycle, Policy Coherence that can be employed to understanding the challenges of policy/plan integrations. While acknowledging that these different models and framework may be applicable, this research focuses specifically on Rational Planning Model (RPM) and Abraham Maslow's theory of needs. This decision is not to suggest that these models are superior or other theories are less relevant but rather were chosen due to their distinct yet complementary relevance to the understanding human motivation and decision-making processes. While RPM is structured step-by-step approach to decision making ideal for systematically integrating WASH needs into local plans, Maslow's theory of needs aligns with the study's focus of addressing basic needs such as WASH which is a human right. The section provides an overview on the state of WASH integration in the local plans of Ghana, particularly in the selected Districts.

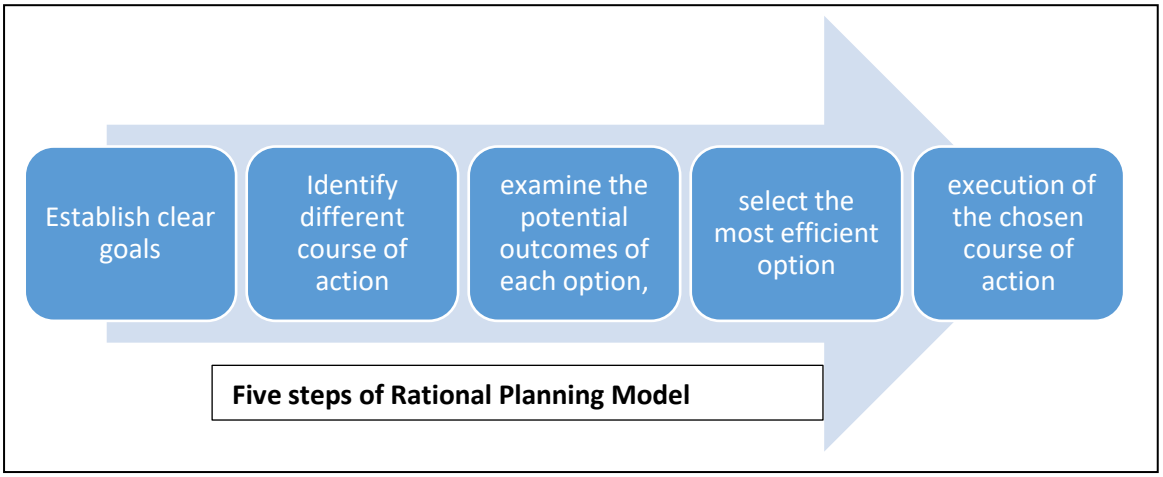
2.1 Theoretical Underpinnings

2.1.1 Rational Planning Model

This study is informed by Rational Planning Model, "Rational" which according to Merriam-Webster (Franklin Language Master 1993) is defined as having a reason or understanding. "Rational" according to Dzurik and Feldhaus (1986) also means "good and correct decision" Khistry and Arlan (2005) defined Rational Planning Model as sequential definite and precise decision-making approach, and it's made up of 5 predefined steps. These include identification of clear goals, identification of different course of action, examine the potential outcomes of each option, select the most efficient option and execution of the chosen course of action (Rosenhead, 1989 cited in Khistry and Arslan, 2005). Rational Planning Model therefore issue out an ordered

framework for making decisions and planning allowing institutions to make reasonable choices based on logic, examination and evidence. The systematic step by step approach to decision making of Rational Planning Model is mostly used in urban planning and public policy to ensure that decisions are formed rationally and based on sound data.

Figure 1: Rational Planning Model



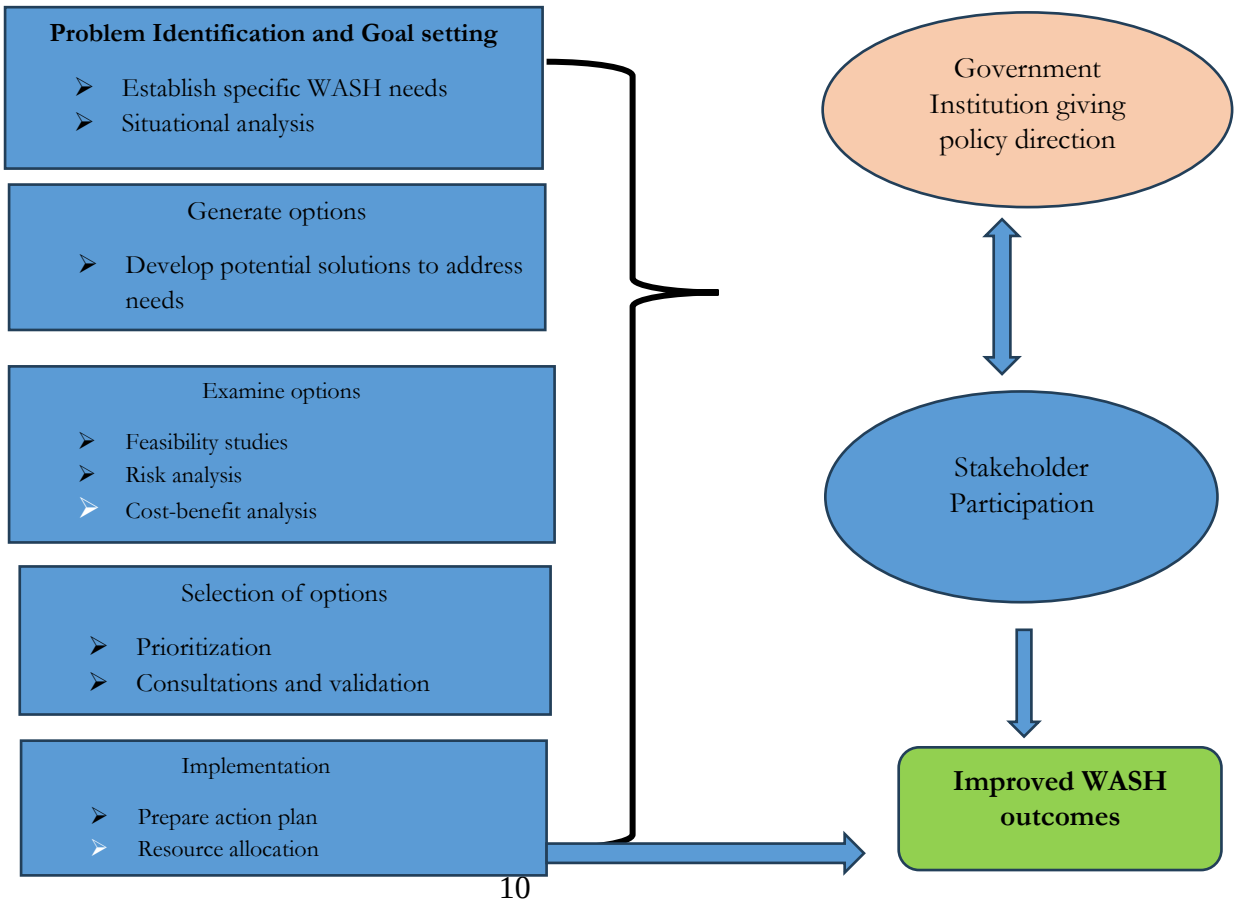
Source: Author's construct with ideas from Herbert Simon (1960)

Simon (1960) in his book "The New Science of Management Decisions" delves into the concept of rationality in decision making. He highlighted on the significance of identifying all likely alternatives, assessing the consequences of each alternative and choosing the option that maximizes the desired outcomes. He however noted that, decision makers mostly operate under situations of uncertainty, limited time, information and have inadequate cognitive abilities. Contrary to Simon's assertion, Bendor (2015) explains Lindblom's concept of "incrementalism". Here, he contends that decision makers often depend on incremental changes to existing policies instead of conducting an extensive analysis of all likely options. He went further to outline Lindblom's concept of incrementalism as an approach of policy making that emphasizes on little incremental changes and flexible decision making. This approach highlighted on the limitation of decision makers cognitive capabilities and the limitations imposed by political realities. Taylor (1998) posited that when assessing different options for a plan, a rational planner centres on scientific and qualitative information. Non-measurable factors such as oppression or displacement are often overlooked or ignored in the evaluation process as seen in the five-step decision making model. Even though the RPM centres on achieving "scientific efficiency" through logical decision making, it has been criticized over the past thirty years because of its fundamental assumptions are often not met in practical application (Khristy and Arslan, 2005). Friedmann and Hudson (1974)

identified three main challenges with the model. The first challenge identified is knowledge, especially in handling uncertainty as predicting future outcomes requires subjective probability judgement. The second challenge confronting the theoretical framework of RPM is what economist call the community welfare function, which entails valuing trade-off among various societal goals. The third challenge is implementation. In a bureaucratic system, decisions are mostly made without putting into consideration whether they can be effectively implemented. It cannot be assumed that decisions will be implemented effortlessly especially in a political context. It important to note that, making decisions in the real world is unpredictable. Rational Planning Model offers a step-by-step approach to policy making and decision making involving various distinct phases. The following key phases of the model are of particular relevance in this research: problem identification and establishing goals, and implementation. By engaging on these key phases of the model, the study presents important insights into the processes, challenges and opportunities associated with integrating WASH needs into the local development plans in Ghana.

Figure 2:Stages in WASH integration in the Rational Planning Model.

Source- Author's construct 2024



The diagram above shows the step-by-step approach in improving the WASH outcomes. The process starts with policy direction from Government institutions (NDPC) through the National Development Policy Framework to the MMDAs. At the local level where plans are prepared, in the context of improving WASH, it starts with problem identification and goal setting. This is carried out to establish the WASH needs of the people. Situational analysis is done through needs assessment and profiling of the district. The next step is generating options where potential solutions that could address WASH needs are identified. The third step is examining the options identified and subject them to feasibility studies to establish how practical and achievable they are. Carrying out risk assessments is to identify the likely risks associated with the selected options for sustainable solutions. Also, cost-benefit analysis is conducted to assess expected financial implications of the options and expected benefits. Selection of the options are based on prioritization for the most feasible options to be selected. This is done through consultations and validation by stakeholders. At the implementation stage, once the option is selected, it is earmarked for implementation where a detailed action plan is prepared outlining resources that are allocated, timeframe of implementation and implementing partners. Government institutions and stakeholder participation are essential in ensuring the ultimate goal of improving WASH outcomes.

For this study, the best fit definition of Rational Planning Model stemming from the definitions by Simon and Lindblom will be defined as a *systematic approach to decision making that aims to achieve results through logical step-by-step process of problem identification, data collection, generating of options, evaluation and implementing. While it gives a clear framework for making of decisions, its realistic application is constrained by human cognitive limitation, inadequate information and complex social and political realities.* The chosen definition acknowledges the strength of rational planning model in providing a structured approach in planning while also appreciating its limitation in real world context. It aligns with the criticisms and modifications proposed by Simon and Lindblom. It serves as an appropriate framework for understanding how WASH needs are integrated into local plans, assisting to identify factors that influence decision making procedures, challenges and opportunities of integration.

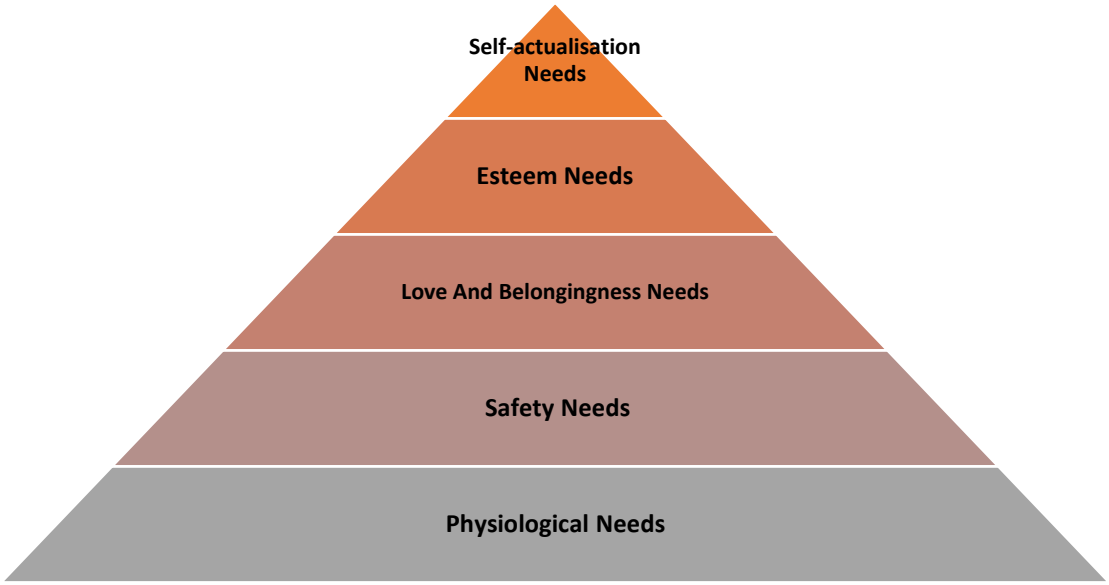
2.1.2 Abraham Maslow's Theory of Needs

Over the years, various theories such as the Theory of Planned Behaviour by Icek Aizen emerged to point out factors that derive human behaviour and decision-making process. One of such theories include Abraham Maslow's theory of hierarchy of needs. Maslow posits that individuals

are motivated to fulfil basic needs before progressing towards a higher-level need. He outlined 5 different levels of need; physiological needs, safety needs, love and belongingness needs, esteem needs, and self-actualisation needs. He further emphasized on the importance of meeting the lower-level needs before moving on to the higher needs. The theory of motivation asserts that human needs are ordered in a hierarchy with lower-level needs taking lead till they are satisfied. When the physiological needs (basic need) are fulfilled, individuals can focus on safety or security need (Gambrel and Cianci, 2003).

Clayton Alderfer introduced the Alderfer's Existence, Relatedness and Growth (ERG) theory in 1969. He puts Maslow's hierarchy into 3 groups namely Existence needs, Relatedness needs and Growth needs (Arogundade and Akpa, 2023, p.233). The theory allows simultaneous satisfaction of many needs and also acknowledges that individuals may revert to lower-level needs when higher levels are frustrated. The groupings are similar to the Maslow's theory of needs as both theories suggests that individuals constantly strive towards achieving their basic needs and after fulfilling these, they seek to satisfy more advanced level of needs. From the insights of Maslow and Alderfer, the theory of needs can be established as a *framework that describes the motivations and priorities of individuals and communities highlighting on the satisfaction of basic physiological needs, safety needs and social needs as crucial for promoting overall wellbeing and personal growth.*

Figure 3: Maslow's Theory Of Needs



Source: Gambrel and Cianci, 2003.

In Maslow's hierarchy, physiological needs such as food, shelter and sanitation form basis upon all higher level of needs. This theory aligns with WASH integration in the local plans as it underscores that, meeting basic needs is crucial for people to move to higher level development. Providing adequate WASH interventions allows individuals to pursue education, other economic activities and actively participate in society. By incorporating Maslow's theory of needs into this research will help guide local authorities, development planners, policy makers and other stakeholders to acknowledge that basic needs such as WASH is not an option but an essential condition for human development thereby encouraging allocation of adequate resources for WASH implementation.

This study benefits from both Rational Planning Model and Abraham Maslow's theory of needs as the theoretical framework. RPM assists in examining the processes in making decisions in WASH integration at the local level and Theory of needs highlights on the importance of addressing basic WASH needs before focusing on higher level needs. By merging these theories, we gain an extensive understanding of factors influencing the incorporation of WASH needs into local plans, challenges and opportunities of WASH integration and also informing strategies to address WASH challenges effectively.

2.1.3 Integration

According to Merriam Webster, "integrate" refers either "to form, coordinate or blend into a functioning or unified whole" or "to incorporate into a larger unit or to unite with something else" (Merriam-Webster, 2024). Term integration as noted in the Cambridge dictionary, it is "the action or process of combining two or more things in an effective way". In the context of public policy, it denotes to the process of bringing together various sectors, actors and levels of governance to create a united and complementary policies that address interconnected challenges (Persson and Sjostedt, 2012). As noted by Meijers and Stead (2004), policy integration entails managing complex issues in policy making that spans across boundaries of policy areas and fall outside particular responsibilities of individual departments. Candel and Biesbroek (2016) notes that policy integration involves the inclusion of specific objectives across various sectors achieving alignment and preventing disagreement between sectoral policies. Briassoulis (2004) posits that policy integration can be understood at three levels, and they include horizontal integration, vertical integration and functional integration. This study focuses on vertical approach to policy integration

where different government levels such as national, regional and local level interrelate to ensure consistent policy implementation.

2.2 National Development Policy Framework

The 1992 Constitution of Ghana provides a legal frame for fair, impartial and encompassing development within the country guiding all succeeding governments to "…. Take all necessary action to ensure that the national economy is managed in such a manner as to minimise rate of economic development […]" (Article 36, clause 1). To forfill this provision in the constitution led to the establishment of National Development Planning Commission (NDPC) to advise presidents on development planning strategy. The government of Ghana prepares and executes the national development policy frameworks that set out strategies and priorities for the development of the country. It mostly covers long periods such as 5,10, Or 20years. Currently, the National Medium Term Development Policy Framework which is being implemented covers 2022-2025. This policy framework is drawn from the national development strategy referred to Agenda 2057 or Ghana @ 100 which envisions a democratic, all-inclusive and self-sufficient developed country by 2057. It also aligns with international commitments such as Sustainable Development Goals, (SGDs 2030), African Union Agenda 2063, ECOWAS vision 2050 that guides in the preparation of sector and district plans.

2.2.2 Medium Term Development Plans

Medium Term Development Plans translate to broad objectives highlighted in the National Development Policy Framework into practical strategies, goals and targets for a specific period. At the local level, Districts/Municipalities/Metropolitans prepare their own development plans to address their own local challenges. These development plans are expected to be harmonized with the National Medium Term Policy Framework (NMTDPF). This suggests that local plans and budgets of the Assemblies should be in harmony with the development dimensions of the NMTDPF.

2.2.3 Ghana's decentralized Development Planning System

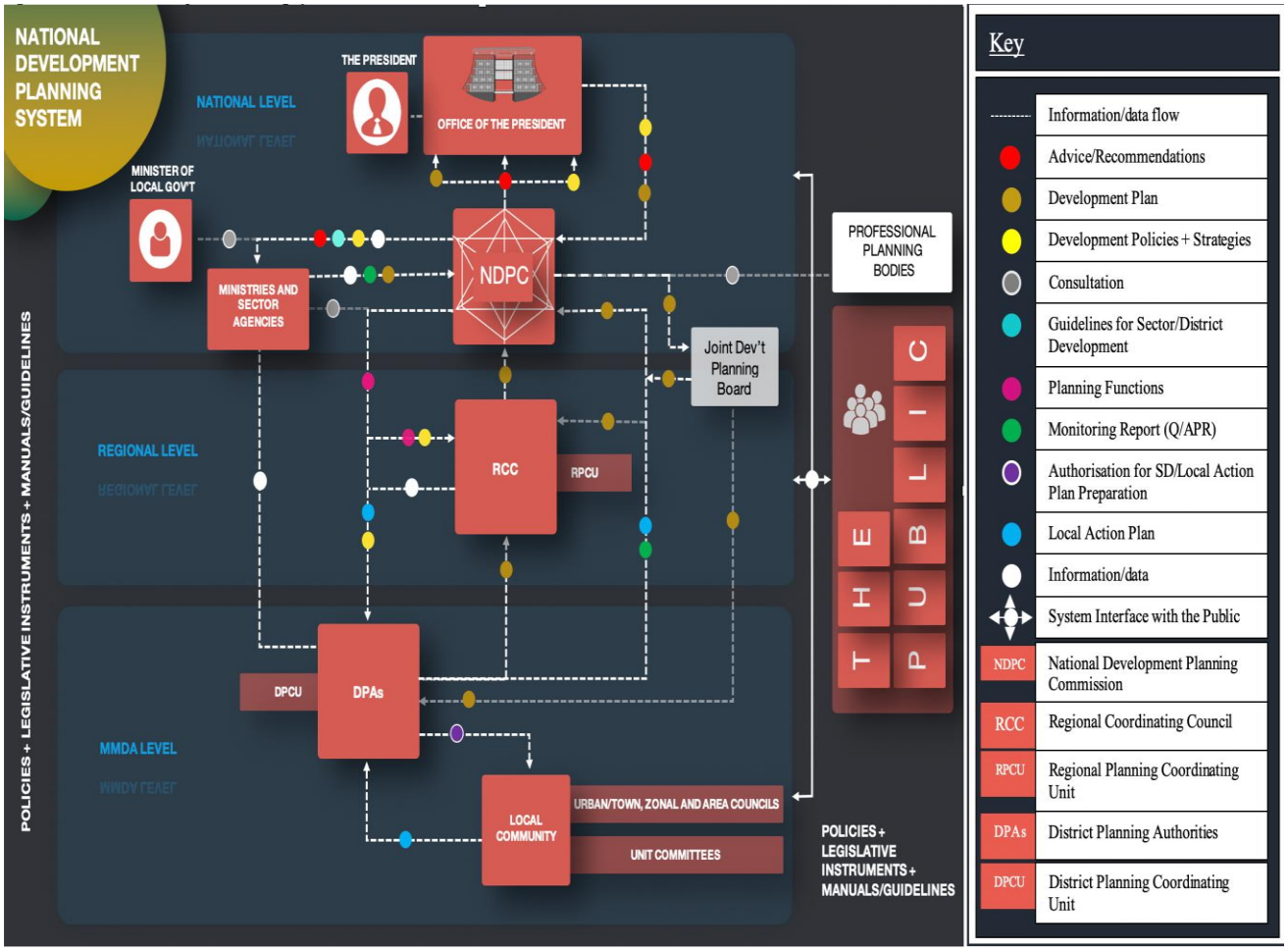
Ghana runs a decentralized development planning system which entails the transfer of planning responsibilities and decision making across different levels of government: national, regional and district level. The NDPC by Section 1 of Act 480 conferred the Commission as the coordinating body of the decentralized planning system. Botchie (2000) notes that the decentralized planning

system was designed to explicitly enable the delegation of power, responsibilities and expertise in executing programmes and projects from the national government to the district level authorities.

2.2.4 Institutional Arrangements of Decentralized Planning System.

At the National level, NDPC as the highest planning body oversee the entire decentralized planning system ensuring that, there is coherence and alignment with national development strategies. National Development Planning Commission per the ACT 479 is responsible for coordinating national plans and also provide the framework and guidelines for the plan preparation. In accordance with Article 225 of 1992 Constitution and ACT 2016 (ACT 936) established Regional Coordinating Councils (RCC). Section 190 of ACT 936 further mandates RCC to perform planning functions under the Regional Coordinating Planning Unit (RPCU). They are required coordinate and harmonise district plans ensuring that they align with national development priorities. Furthermore, Section 82 at ACT 936 established Metropolitan, Municipal and District Assemblies as planning authorities at the district level and are mandated to prepare MTDPs as prescribed by the NDPC. This decentralized development planning approach allows local governments at the Municipal/district level to identify and address specific WASH issues at their jurisdictions by consciously formulating targeted plans and mobilizing resources to meet local WASH needs.

Figure 4: National Development Planning System



Source: extracted from MTDP 2022-2025 preparation guideline (2021)

2.3.1 Access to WASH Services in Ghana

One of the main problems confronting developing countries is inadequate access to Water and Sanitation facilities. Although there has been noticeable improvement on access to water globally, WHO reports that over 700 million population worldwide lack access to improved water sources which is almost half these population live in sub-Saharan Africa (WHO, 2014). According to World bank, about 5,100 children in Ghana die annually due to diarrhoea with 90% of these deaths linked to poor water, sanitation and hygiene conditions.

The 2021 population and housing census reports that 87.7% of the population has access to basic water supply services. Again, more households that still depend on unsafe water sources in Ghana is 8% (GSS, 2022). The census report further indicates that only 25.3% of the people had access to non-shared improved sanitation as 25.3% and 17.7% of Ghanaian population still practice open defaecation. Poor sanitation has high financial consequences as Ghana loses an estimated amount

of US$ 290 Million per year which is equal to US$12 per individual or 1.6% of the country's GDP (World Bank, WSP, 2012).

2.3.2 Hardware and Software components of WASH

Although enhanced WASH services have economic returns through reduction of health cost, prevention of mortality and increasing productivity (WHO 2008), many countries globally struggle to establish and sustain WASH services due to inadequate funds, poor water quality standards, poor management and lack of accountability of WASH services (Montgomery and Elimelech, 2007). Hardware WASH component basically refers to physical infrastructure and equipment necessary to provide WASH services. They include provision of water systems such as boreholes, piped water, small town water supply, sanitation facilities such as refuse containers, construction of toilets and hygiene products such as hand washing basins and soap. According to Jenkins and Sugden (2006), hardware components are vital for addressing the structural needs of WASH, providing a solid ground for access to clean water and good sanitation. Software component on the other hand refers to social, behavioural, and educational strategies that support and foster the effective use of hardware components. These include health sensitization programmes, community outreach programmes, capacity building and enforcement targeted at sustaining behavioural change. Jones (2013) argues that sustainability of WASH depends on not only on physical infrastructure but also institutional arrangements that underpin service delivery. Scholars in the WASH sector advocate for innovative context specific interventions that optimize limited resources. In addition to this, Kayaya et al. (2020) argue that, decentralized, low-cost treatment systems are important in informal urban settlement where access to centralized water infrastructure is inadequate. For Software component, experts advocate for the need for participatory approaches that incorporate community feedback to WASH planning and implementation. Schouten and Mathenge (2010) emphasized on the essence of integrating behaviour centred interventions that address social cultural and economic factors influencing sanitation practices. Similarly, Sara and Katz (2009) posit that increased funding for health education and behavioural change activities are crucial in reducing the prevalence of hygiene related diseases. Some experts in the WASH sector emphasized that an integrated approach, combining both hardware and software components is crucial. WHO and UNICEF (2019) jointly argue that, allocating resources should be shared equally shared to both components to maximize impact. This is further echoed by the World Bank (2016) who argue that the provision of infrastructure alone cannot address WASH challenges without actively involving communities in the process and ensuring that supportive policies are put in place.

2.3.3 Challenges and opportunities of WASH integrations

The integration of WASH into development plans is critical for achieving sustainable development and enhancing public health and addressing poverty. Millions of Africans who drink contaminated water are located in unhygienic surroundings face risk of getting preventable illnesses such as diarrhoea, cholera and sickness that causes mortality (Kashiwase, cited in Alhassan and Hadwen, 2017). Socio cultural challenges hinder the adoption of WASH practices. Cairncross et al. (2010) posits that, in several communities, traditional beliefs and practices which relate to water use, sanitation and hygiene can conflict with modern WASH interventions. According to Sommer et al (2015), gender dynamics also play critical role as females are mostly affected by poor WASH services but may have limited voice in decision making process. Globally, several highlighted that that, despite the increasing recognition of the significance of WASH, financial constraints continue to be a barrier for countries to fully integrate WASH needs into the development plans. Inadequate funding hampers the implementation, maintenance and sustainability of WASH infrastructure leading to disparities in service provision especially in rural and underserved areas (Hutton and Bartram, 2008)

2.3.4 An Overview: Integrating WASH Needs and Other Development Challenges into Local Plans in Ghana

WASH interventions are critical to public health and development and in Ghana, access to WASH services to all citizens continue to be a major challenge which is crucial to attaining SDGs, particularly Goal 6. The growing demand for WASH services in the country calls for enhancing planning, implementation and reporting at the MMDA level to ensure inclusivity. The approach to integrating WASH needs and other development challenges into the local development plans in Ghana involves several strategies: NDPC provides guidelines and policy frameworks for the plan preparation as stipulated in ACT 1994 (ACT 479). In the decentralized Planning System, the Local Governance ACT 2016 (ACT 936) requires local governments to incorporate WASH issues and other development issues in their MTDP. The MTDPs and Annual Action Plans serve as critical tools for prioritizing WASH investments. The decentralized planning ensures that local needs and priorities are tackled effectively.

Stakeholder participation is essential in every step of the planning process to promote ownership and inclusiveness of the plan. By engaging with local communities, local communities, local leaders, civil society organizations ensures that WASH interventions are community driven and sustainable.

Capacity building for local government staff, community heads and opinion leaders is important as it enhances their ability to plan, implement and monitor development projects including WASH projects. Mobilization of funds through internally generated funds, donor funds and cross-sector collaboration such as Public Private Partnership is critical for WASH inclusion and sustaining WASH interventions.

Chapter 3

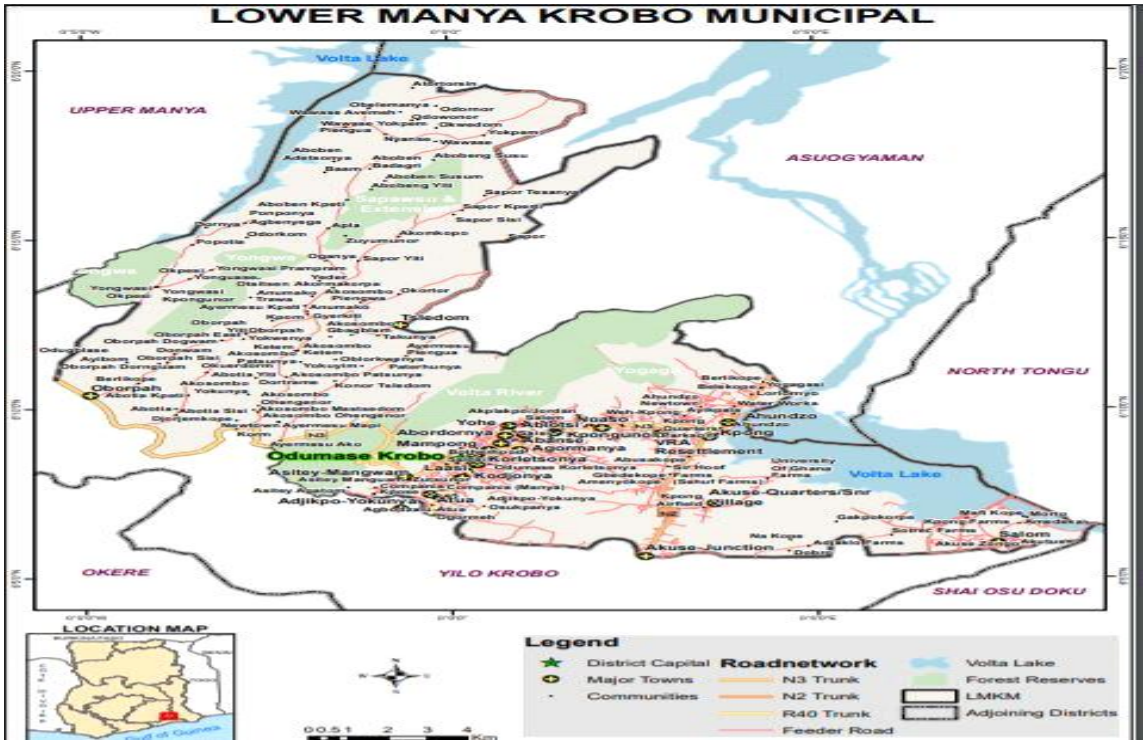
Research Methodology

3.0 Background of study Areas

3.1 Lower Manya Krobo Municipality profile

Lower Manya Krobo Municipality is one of the 33 District/Municipality in the Eastern region which lie between Latitude -6.2 to 6.59N and Longitude -0.3 to 0.00 W of the Greenwich meridian at an altitude of 457.5m. Lower Manya Krobo was upgraded to municipal status on 9th February 2012 through legislative instrument 2046 (LMKM MTDP 2022-2025, 2021). As at 2021, the population of the municipality stood as 121,474 comprising 56,662 males and 64,816 females and the population is projected to reach 126,436 in 2025 (GSS, 2022; LMKM MTDP, 2021). The municipality encompasses about 235 settlements within four zonal areas. It shares borders with Upper Manya District to the northeast, North Tongu to the southeast, Yilo Krobo municipal and Dangbe West district to the south (LMKM MTDP 2022-2025, 2021).

Figure 5: Map of Lower Manya Krobo Municipal



Source: (LMKM MTDP 2022-2025, 2021).

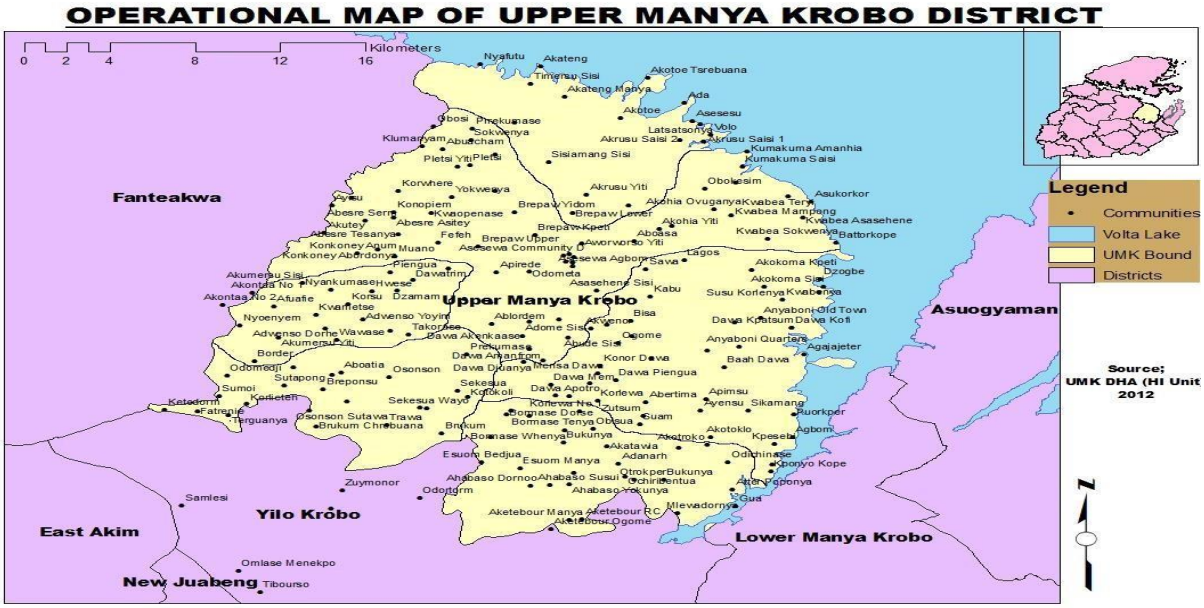
3.1.1 Situational Analysis of WASH

Ghana Water Company Limited supplies pipe borne water to the urban areas (Kpong and Odumasi) while the middle belt of the municipality depends on boreholes. The municipality has 42 boreholes with 32 boreholes mechanized and 10 boreholes non mechanized. 13 of the boreholes are defunct. The boreholes are inadequate and sometimes unsafe. Burst pipelines in the urban areas contribute to poor water quality and some of the boreholes contain high iron content making it unsafe for consumption (LMKM MTDP 2022-2025, 2021). The sanitation infrastructure comprises of various facilities such as 44 KVIP/public toilets, one final disposal site and 16 communal refuse containers. There is however unequal distribution of public toilet infrastructure across four zones as Kpong zone has 17, Odumase 23, Akuse 4 and Oborpah has none.

3.2 Upper Manya Krobo District

Upper Manya district was curved from Lower Manya Municipality by L.I 1842 in 2007. The district situated to the east of Ghana between Latitude -6.2 to 6.5ºN and Longitude -0.3 to 0.0ºW of the Greenwich meridian and altitude of 457.5m. The district population according to 2021 population and housing census is 90,826 with males making up 45,958 and female 44,868 (GSS, 2022) Upper Manya district largely a rural district with 64,223 people (77%) residing in rural area compared to 19,285 population (13%) in residing in urban areas.

Figure 6:Map of Upper Manya Krobo District



Source: UMKD MTDP 2022-2025, 2021

3.2.1 Situational analysis of WASH

In Upper Manya district, households rely on four primary sources of water supply namely boreholes, wells, streams, public taps and pipe borne water. About 37.7% of the population consume water from boreholes (Composite budget 2022-2025, 2021). About 86% of households in the district primarily depend on public standpipes for water supply. This is likely due to the small-town system available in Assesewa. Protected springs are the least utilized water sources in urban area. For rural households, the main source of drinking water is boreholes (44.3%) and stream/river which account for 35.8% of the population. In the area of sanitation, waste management poses a significant challenge with refuse mostly being managed on site through raking or burning. Often, the rate of the refuse dumping out paces disposal efforts, leading to large piles of refuse accumulating at various disposal sites (UMKD 2022-2025 MTDP, 2021).

3.3 Research Methodology and Methods

The study stems from the constructivist epistemological point of view. Constructivism notes that knowledge is not fixed but instead constructed through social interactions and shared meanings (Creswell, 2021). In this study, the researcher drew upon multiple sources of knowledge to construct an extensive understanding of WASH integration into local plans. It acknowledged the importance of researcher's active engagement with study participants in co-constructing knowledge and understanding of WASH integration. Hence, a multi-method research approach was adopted in this study. Multi method research according to Seawright (2016, p.2) entails integrating data collection and analysis techniques from more than one research approaches. Thus, data was collected through two qualitative methods i.e., document review and key informant interviews. Patton (2014) posits that triangulation strengthens the study by fusing techniques to ensure that the inherent constraints of one of the techniques are compensated by the strength of another. In terms of design, case study design was employed as it allows for in depth exploration of the real-world context specific challenges and opportunities faced in integrating WASH needs into local plans. Contrary to broader research designs, case study approach prioritizes depth and detail, providing insights to specific dynamics at play in the locale.

3.3.1 Data Collection techniques

Data were sourced from both primary and secondary sources. Secondary sources of data comprised articles, journals, thesis relating to the study were reviewed. I reviewed literature on WASH globally, nationally and district/municipal context, development planning system among others. These enhanced the conceptual and theoretical stance of the research. Annual plans and composite budgets were reviewed. Data collected were through document review checklist and key informant interviews.

Document Review

Documents reviewed were the 2022-2025 local plans of Lower Manya Krobo and Upper Manya, Districts/Municipalities (sourced from District/ Municipal Development Planning Officers). The MTDPs of both districts outlines strategies and programmes for infrastructure development and also aimed at promoting productive activities and social development. The local plans explain the framework that guides the management of the district towards Agenda for Jobs under the NMTDPF. To ensure an extensive and reliable approach, I adapted checklist from WASH planning tool kit as a guide to analyze the local plans of the selected districts. As noted by Bowen (2009), a checklist is a useful tool for managing the complexities of document review as it enables the researcher to organize and analyze information in an orderly manner. By adapting the WASH Planning checklist, I ensured that it captured all the WASH dimensions and addressed some of the research questions extensively. Due the volume of the local plans the checklist helped maintain consistency as it ensured that each local plan was examined with the same level of scrutiny and attention to detail.

Key informant interviews

To further understand factors influencing WASH integration challenges and opportunities, key informant interviews were conducted online through phone calls. Key informant interview serves as a critical instrument for collecting comprehensive, context specific data from well informed individuals who have firsthand experience or expertise in a particular field (Marshall and Rossman, 2016). This method gave room for the clarification on factors influencing WASH issues incorporated into the local plans. Six (6) people who are critically important in WASH plans preparation in the 2 study areas were purposively chosen to take part in the study. They included the coordinating directors, environmental health and sanitation officers, planning officers and works engineers. These interviews were carried out with the assistance of an interview guide. As

noted by Bryman (2016), interview guide ensures that the researcher includes all essential elements of the topic during the key interview providing a systematic and extensive approach to data collection. By outlining set of predetermined question, it helped reduce the risk of excluding critical information during the interview process and it also fostered consistency of data collection. The total of 6 (six) key informants were made up of Planning officers (33%), Works engineer (17%), Coordinating Director (17%) and Environmental Health officers (33%) with average of 6years working experince in that position. The informants were all males and Heads of their Departments and Units. Each interview conducted lasted about 36 minutes to 1hour and were centred on factors influencing WASH integration, challenges and opportunities of WASH integration.

Data processing and Analysis

After collecting relevant documents, I analysed the local plans of the study areas focusing on the WASH issues addressed in the plans. With that in mind, I carefully examined how well the plans address WASH related problems, goals, objectives and projects are linked to the provision of safely managed WASH services. To quantify the extent of integration of WASH needs, each indicator (i.e., comprehensiveness of WASH problems, comprehensiveness of WASH goals, comprehensiveness of WASH objectives and comprehensiveness of WASH projects) were assigned a score ranging from 0 to 2 based on the following criteria.

- *Not Present (0 point)*: The local plan lacks any references or information on this indicator.
- *Low (1 point)*: The indicator mentioned of discussed in brief in the plan or only a basic level with limited evidence and little connection with safely managed WASH services.
- *High (2 points)*: The indicator in the plan extensively addressed, supported with solid evidence and clearly connected to safely managed WASH.

Additionally, I examined the budget allocations for WASH interventions and the strategies employed to execute these interventions.

Content/document analysis is systematic, objective and contextual approach that allows for extensive understanding of WASH interventions and informing proposed actions to enhance WASH services. It also gives room for replication of the study to validate the findings since content analysis follows a clear set of process.

Thematic analysis on the hand was used to analyse Key Informant Interviews. Manual coding was employed as the central technique used for the qualitative data analysis due to its ability to provide a detailed and context-sensitive analysis. According to Saldaña (2016, p. 126) it entails the

systematic categorization and interpretation of qualitative data, giving researchers to distil large volumes of text into manageable and relevant themes. The process began with the review of the transcribed interviews based on recurring patterns and themes related to the research questions. Audio recorded data from the interviews were listened to multiple times transcribed and notes taken down for future reference during analysis. Data was anonymised and categorized by respondents' geographical location. The interviews were adequate as no new information or theme were emerging from their responses, known as saturation (Dworkin, 2012). In carrying out the coding of the data, it enabled the identification of both deductive codes informed by the research questions and inductive codes emerged organically from the data. By applying these coding schemes across all the interviews, the research was able to establish key themes that addressed the challenges and opportunities of WASH integration. Braun and Clarke (2006, p.87) notes that such an approach is particularly effective in qualitative study where the goal is to understand complicated social phenomena through the perspectives of participants.

3.4 Research Limitations

The research could not sufficiently capture the perspective of all the participants as two of the participants could not make time of this study due to their extremely busy schedules. Their insights and experiences on how are were involved in WASH planning in the current MTDP under study was missing. Furthermore, out of the 261 MMDAs in Ghana, this research was restricted to two Districts, and this may affect the generalization of the findings. Acknowledging these limitations, the study engaged in in-depth case analysis and further recommends follow-up research with a broader sample of districts/municipalities across Ghana.

3.5 Researcher's Positionality and Ethical Considerations

Growing up in the northern part of Ghana, I have experienced at first hand disparities in the distribution of development projects such as WASH infrastructure especially between the urban and rural areas. My academic background in development studies at the bachelor's degree level gave me a strong a solid foundation in understanding the significance of WASH services in the socio-economic context. Understanding this has provided me with the necessary tools to analyse plans effectively.

Also, my professional experience as a development planner has aided me to understand hands-on challenges and opportunities in incorporating WASH needs into local development plans. From personal experience, educational and professional background, I have cultivated a genuine interest

to promote equitable and sustainable development through examining the role of WASH interventions in development plans. Although having worked as a planner for more than 10years within Eastern region where the District/Municipals are selected from gave me easy accessibility of data, my perspective on WASH integration differed from participants perspectives. In order not to be bias or make assumptions/interpretation due to my familiarity to the study area, I carried out the research in all honesty, empathy and dedication to enhancing WASH services for all Ghanaians.

Ethical consent was gotten for the research with permission obtained from the two districts. Before the commencement of the interviews, consent was sought and they were clearly notified about the purpose of the study, voluntary nature of the study and how the data would be used. Participants were assured of privacy and anonymity regarding the information shared and how data would be utilised.

Chapter 4

Presentation of Result and Discussions

4.0 Introduction

Presentation and discussion of research findings are the pivotal parts in the research procedure where unprocessed data is converted into meaningful insights. This section presents major findings and discussions from the data collected through the document review and Key informant interviews. The research findings are examined in the light of the research objectives highlighting on the notable trends and unexpected outcomes. Also, discussion of the findings is followed comparing them with previous studies.

1. WASH challenges addressed in the local plans of the districts/municipality

Table 1:WASH Challenges Addressed in the Local Plans Of The Districts/Municipality

UPPER MANYA KROBO MTDP				
No. of activities	**2022 AAP**	**2023 AAP**	**2024 AAP**	**2025 AAP**
Total of all Activities	153	128	127	125
WASH activities	9	8	8	8

LOWER MANYA KROBO MTDP				
No. of Activities	**2022 AAP**	**2023 AAP**	**2024 AAP**	**2025 AAP**
Total of all Activities	90	86	85	85
WASH activities	10	8	10	8

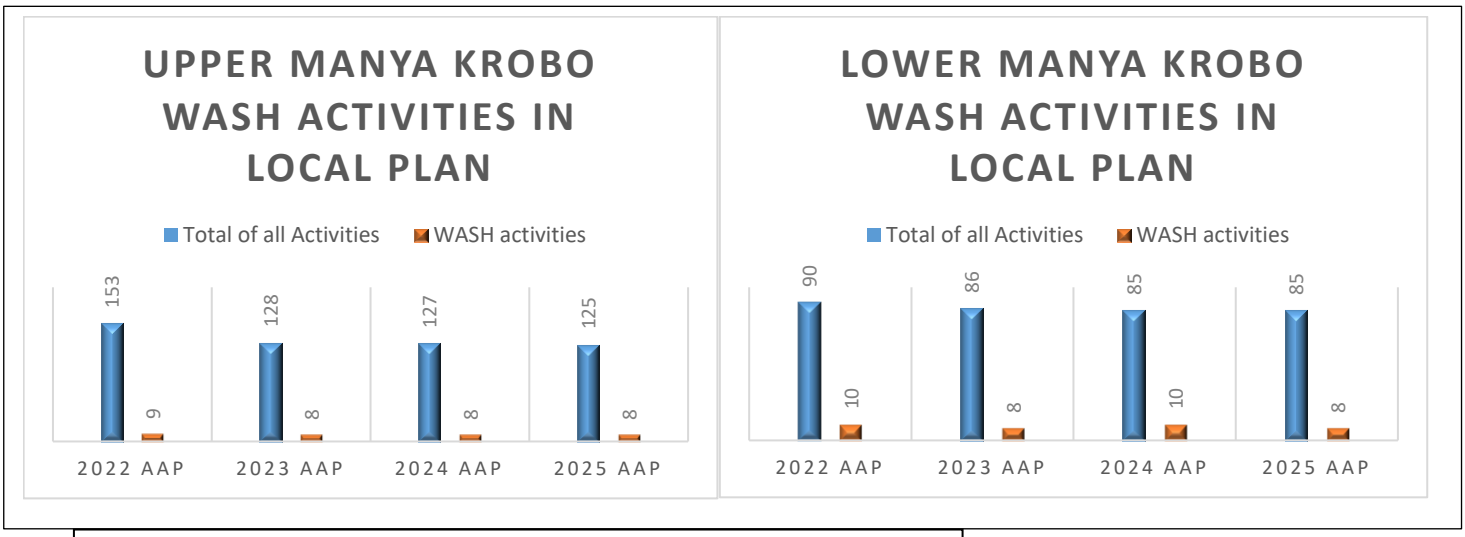
Source: Author's Compilation from the MTDPs, 2024

The data above was extracted from the MTDPs of Upper Manya Krobo and Lower Manya districts. It indicates the total number of activities in the local plan and the WASH activities captured in the Annual Action Plan segment of the plan. A count of these activities was carried out and those captured under WASH. For Upper Manya Krobo, data reveals a general reduction in the total activities across all the annual action plans. WASH interventions remained relatively constant with a slight decrease from 2022-2023. The trend indicates that WASH interventions constantly represent around 6% of all total activities across all annual action plans. This shows that while

WASH is considered an important part of the local plans, it does not necessarily constitute a primary focus of the district. These findings could imply that WASH remains one of many competing priorities in local planning leading to modest inclusion in the annual action plans (Boakye- Ansah et al., 2023).

Turning to Lower Manya Krobo, data reveals fluctuations in the Municipal's prioritization of WASH activities over time. WASH interventions represent 8% to 12% of the total activities in the action plans with a slight decline in 2023 before returning to10% in 2024. This trend suggests that while WASH interventions are typically considered important, their priority within the local plan may differ due to other competing factors. These fluctuations could be attributed to the changes in the local needs, availability of resources and political commitment over time (Moriarty et al., 2013). For example, an increase in WASH interventions in 2024 might suggest a renewed attention on addressing WASH related challenges or availability of extra funds for such interventions.

Figure 7:Graphs showing WASH activities in Upper Manya and Lower Manya Krobo Local plans



Source: Author's compilation of field data, 2024

4.1 Comprehensiveness of WASH Dimensions Through Its Goals, Objectives, Strategies and Projects/Programmes.

Table 2:Comprehensiveness of WASH dimensions through goals, objectives & projects

Upper Manya Krobo District			
comprehensiveness of WASH problems	**comprehensiveness of WASH goals,**	**comprehensiveness of WASH objectives**	**comprehensiveness of WASH projects)**
High (2 points)	High (2 points)	High (2 points)	high (2 point)

Lower Manya Krobo Municipal			
comprehensiveness of WASH problems	**comprehensiveness of WASH goals,**	**comprehensiveness of WASH objectives**	**comprehensiveness of WASH projects)**
High (2 points)	High (2 points)	High (2 points)	high (2 point)

Source: Author's compilation of field data, 2024

One of the study objectives is find out the comprehensiveness of WASH dimensions (i.e Water Sanitation and Hygiene) captured through the goals, objectives and projects in the plans. This is to know if the WASH captured are aligned with the national policy framework and global agendas as it helps in tracking the progress and assessment of impacts of the interventions. As explained in the methodology section, scores from 0-2 were assigned to indicators with score 0 point indicating that the local plan lacks any references or information on this indicator. *Low (1 point)* showed indicator mentioned or discussed in brief in the plan or only a basic level with limited evidence and little connection with safely managed WASH services and *High (2 points)* depicting that the indicator in the plan extensively addressed, supported with evidence and clearly connected to safely managed WASH.

Upper Manya Krobo and Lower Manya Krobo both scored high points (2 points) across all the WASH dimensions showing a comprehensive approach to addressing WASH related issues within their various districts/municipality providing strong evidence and clear connection to safely managed WASH services. By executing these projects in the local plans, the districts are positioned to make considerable progress in improving WASH services as enhanced WASH is critical for alleviating poverty, fostering equality and promoting socioeconomic growth (Hutton and Chase, 2016; p.2). One of the key components of Rational Planning Model is problem identification and setting of realistic goals. In the case of Lower Manya Krobo and Upper Manya Krobo District a thorough review of WASH issues in the local plans showed an extensive data and evidence which points to a well searched understanding of WASH issues pertaining to the various districts which

is essential for developing effective interventions. The information in the 2022-2025 MTDP of the two Assemblies shows data on water and sanitation coverages and due to the severity of the problem, "*inadequate access to potable water*" became the second top priority of Upper Manya Krobo District. This thorough assessment of development problems ensures that, the strategies and projects developed are appropriate and capable of addressing the identified challenges (WHO, 2008). This aligns to Rational Planning Model as the plan begins with a clear-cut identification of development problem/challenge ensuring that subsequent steps in the planning process such as goal setting, generating options, selecting of options and implementation are grounded.

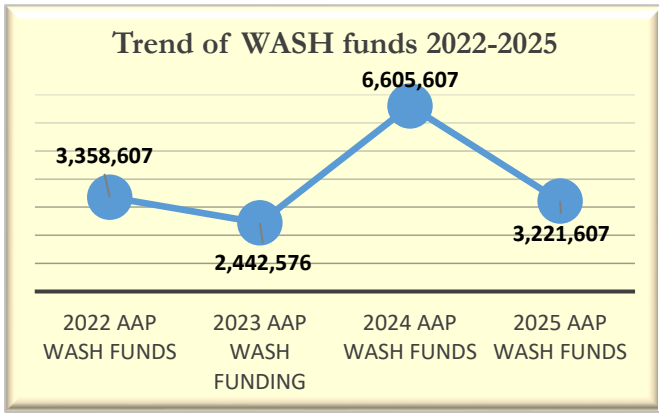
As we saw in the RPM, Goal setting is a key component to achieving effective outcomes. The findings from the local plans showed the comprehensiveness of goals as both local plans have clear goals based on their current WASH challenges for enhancing WASH. For example, UMKD have goals on WASH to include "*Ensure availability and sustainable management of improve water and sanitation" and "Promote a clean and safe environment" (UMKDA MTDP 2021; p.56-56).* This highlights the district's WASH goals alignment with National Policy Framework on WASH and international targets such as in SDG (6). This alignment is essential for ensuring that local efforts contribute to global progress in improving WASH services. This further links to Rational Planning Model requirement for thorough analysis of problem and clear goal setting. It points out that, the district is not only focusing on only urgent needs but also towards a long-term sustainability which is a crucial element of WASH interventions.

Moving forward, desk review of the 2022-2025 MTDPs of the two districts/Municipality also indicated the comprehensiveness of WASH objectives by scoring 2 points. The objectives reflected the plans detailed approach to achieving their goals. For instance, "to *increase water coverage of 85% to 100% by the end of December 2025"* (LMKM MTDP, 2021; p.68). By setting these clear objectives (SMART objectives) the plan ensures that progress of the activities can be monitored and evaluated effectively. Finally, comprehensiveness of WASH projects scored high (2points) as the projects covered all the WASH dimensions demonstrating a practical approach to implementing the WASH objectives. Implementation is a critical stage of RPM as the chosen course of actions are outlined for implementation and it is at this stage that WASH projects are implemented. Based on the Ghana's decentralized planning system, it is at this stage local authorities tailor their projects to meet the WASH needs of their localities. Although the action plans of the two districts showed clear strategies that outlined timeframes, responsibilities and funds allocated to reach WASH goals, from the findings however, Lower Manya Krobo had no project/activity addressing water quality

even though it was indicated as an issue in the municipality. It is also worth noting that, some of the WASH projects in the various plan are horizontally integrated into educational and health projects. For instance, *"Construct 1No.6Unit Classroom block with office, staff common room and toilet facilities"* and "*Construction of 1 No. CHPs compound (clinic) with mechanized borehole"* are in Lower Manya Krobo and Upper Manya Krobo MTDP respectively. These integrations highlight the interconnectedness of WASH with other important sectors. By improving WASH services in schools for example, studies indicate that implementation of WASH in school programs has been linked to positive health outcomes for children, including reduction in diarrhoeal illnesses and other hygiene-related diseases (McMichael, 2019; p. 4). Weber et al. (2018) posits that WASH services in health institutions are vital for the provision of high-quality healthcare and the promotion of infection control practices.

Table 3:Funds Allocated For WASH Interventions In The Local Plans Of The District/Municipality -Lower Manya Krobo

Lower Manya Krobo MTDP WASH indicative budget allocations			
2022 AAP WASH activities	2023 AAP WASH activities	2024 AAP WASH activities	2025 AAP WASH activities
GH¢ 3,358,607	**GH¢ 2,442,576**	**GH¢ 6,605,607**	**GH¢ 3,221,607**



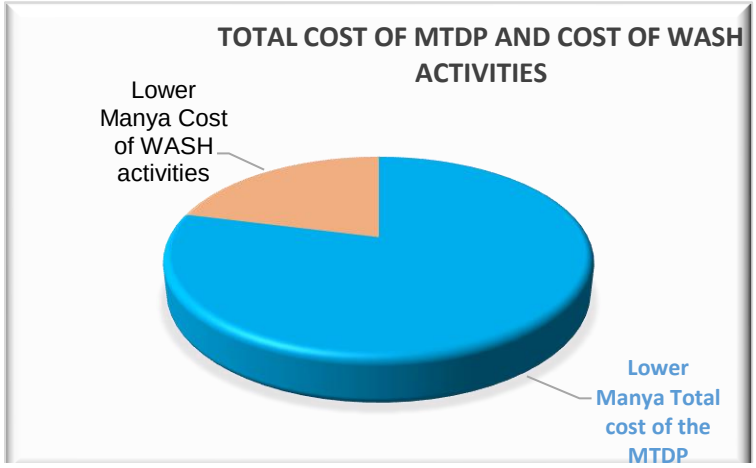
Source: Author's compilation of field data, 2024

A review of the local plans was undertaken to examine the funds allocated for WASH activities. All cost relating to WASH projects and programmes in the action plans were summed up to see the pattern of budget allocation. "WASH financing" generally involves financial resources assigned to fund WASH projects and initiatives. WHO (2014) noted in that, in 2014, 80% of countries acknowledged that their present financing levels are inadequate to achieving their goals for clean water and sanitation and the issue is more pronounced in the rural communities which get less than 10% of global funding on WASH. The data presented above focuses on Lower Manya Krobo Municipal's MTDP fiscal allocations for planned WASH activities from 2022-2025. The budget

allocation for 2023 indicates a decline of about 27% from 2022. This decrease may mean a shift of funds towards to other pressing sectors within the budget. It could also reflect the completion of key projects in 2022 thereby reducing the need for equally costly investments in 2023. Conversely, there was a notable increase of about 170.48% in 2024. This increase could suggest an increased planned expansion of WASH activities due to emerging needs such as the need to improve facilities to support rapid population growth. "Providing safely managed water and sanitation services to the world's urban population would cost almost three times that of providing basic WASH services […]" (Hutton and Varughese, 2016; p. 10). The year 2025 experienced decrease in budget allocation by 51.2% from 2024. This decrease might suggest possible completion of large projects earmarked for 2024 leading to a decreased need for further increase levels of investments.

Table 4:Funds Allocated For WASH Interventions In The Local Plans Of The District/Municipality -Lower Manya Krobo

Lower Manya	
Total cost of the MTDP	Cost of WASH activities
GH¢58,650,818.50	**GH¢15,628,397**



Source: Author's compilation of MTDP, 2024

The total cost of WASH activities in the local plan was compared to total cost of the entire MTDP. The cost of the entire plan for Lower Manya is **GH¢58,650,818.50 (where 1Euro=17.47Ghana cedis 16/09/2024)** and out of it, the total cost of WASH activities is **GH¢15,628,397** representing 26.64%. The allocation of 26.64% of the total budget is a significant portion which highlights that, WASH is one of the priority areas of the Municipality given the fact that it is competing with other sectors such as health, education, agriculture, infrastructure among others. The data suggests that, over one-quarter of the entire local development plan's budget centred on WASH which links to

the broader global objectives. WHO has continuously emphasized the essence of considerable investment in WASH as investing in WASH can generate economic returns of $2 for each dollar invested in water services and $5.50 for each dollar used on improving sanitation (Hulton and WHO, 2012). Although 26.64 percent of the total budget is an appreciable allocation, the effectiveness of these funds depends on how well they address the real needs of the municipality. The decision to allocate substantial portion of the budget to WASH activities may also reflect the strategic planning of the municipality as adequate WASH service can result to wider economic returns. For instance, improved WASH services can decrease the risk of transmitting diseases and outline avoidable pathways according to present top practices (Watson et al, 2019; Monergro et al, 2023; Ducel et al, 2002; Pittet et al, 2006 cited in Hutton et al, 2024).

4.2 Costing of WASH Hardware and Software Activities

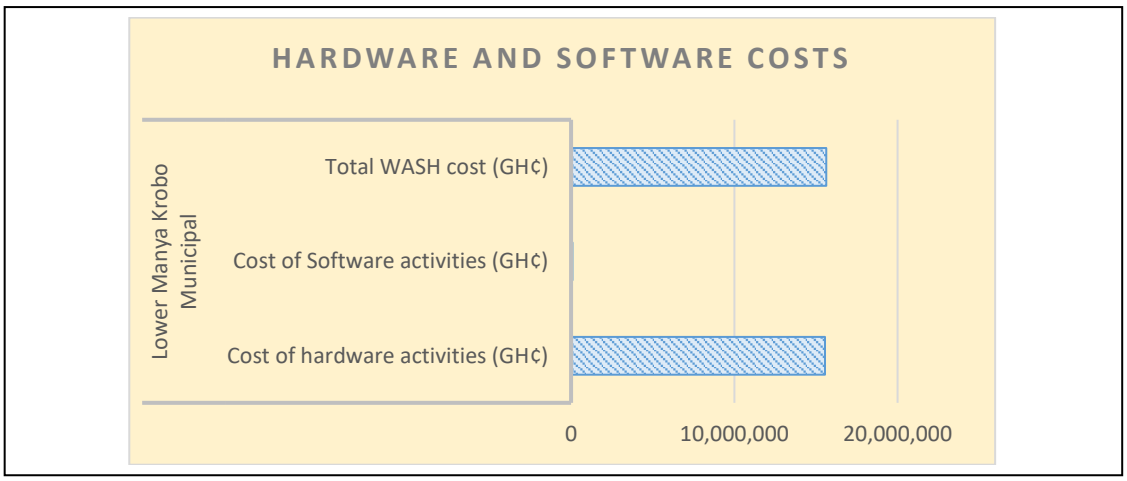
Lower Manya Krobo's WASH costing data was grouped into two categories ie hardware and software components. Hardware cost include cost of construction of WASH activities and software cost include sensitization promotion and administrative costs. Out of the total of 36 WASH activities, 5 activities representing 14% are software activities.

Table 5:Cost Of WASH Hardware And Software -Lower Manya Krobo Municipal

Lower Manya Krobo Municipal				
Hardware WASH activities	Cost of hardware activities (GH₵)	Software activities	Cost of Software activities (GH₵)	Total WASH cost (GH₵)
Examples: Constructions of 5 public toilets, Procure and Place 10 Refuse Containers, Fumigate public places: markets, schools, toilets, hospitals, final disposal sites, refuse container sites Procure and distribute, 10No. refuse containers	15,550,397	Examples: Carry out education/enforcement on medical screening of food vendors/beverage sellers, WASH, noise pollution, household toilets construction, operation and maintenance of public/private cemeteries, desilt drains, burial of paupers/covid-19 corpses, inspection of public places, liquid/solid waste management, arrest and impound stray animals	78,000.00	15,628,397

Source: Author's Compilation of Field Data, 2024

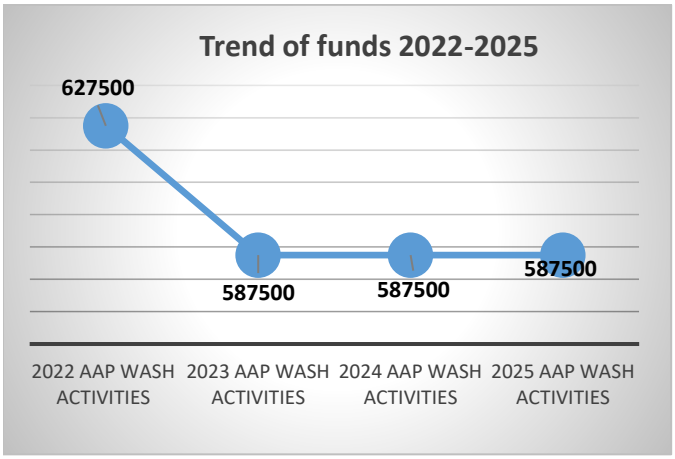
Figure 8:Graph of Hardware and Software costs of Lower Manya Krobo



From the MTDP's dataset for Lower Manya, the total cost dedicated to hardware activities is **GH¢15,550,397** while the cost of software activities is significantly lower at **GH¢78,000**. While hardware activities in the plan involved physical projects construction of toilets, boreholes, procurement of refuse containers and fumigations, software activities involve education and enforcement. Examining the data indicates a vast difference in funds allocated with hardware activities receiving more than 99.5% of the entire WASH budget and less than 0.5% for software activities. The imbalance in the allocations have significant consequences for the sustainability and effectiveness of WASH interventions. For example, studies by WASH experts have emphasized that increasing public awareness serves as a powerful strategy in generating increase demand for improved sanitation services (Mathew, 2005) which is known to promote sustainability (Welle, 2001; p.28). Successful approaches in educating community members about WASH not only encourage community participation but also support behavioural changes (Castro and Maoulidi 2009, cited in McGinnis et al, 2017). Low investment in software activities may reflect broader challenges such as poor political will and limited capacity to engage in community level interventions. Addressing these challenges would demand not only increase financial resources for software activities but also capacity building for municipal staff and stakeholders to implement and sustain these interventions effectively **(**Bartram and Cairncross, 2010**).**

Table 6:Funds Allocated For WASH Interventions In The Local Plans Of The District/Municipality -Upper Manya Krobo

Upper Manya Krobo MTDP WASH indicative budget allocations			
2022 AAP WASH activities	2023 AAP WASH activities	2024 AAP WASH activities	2025 AAP WASH activities
GH¢ 627500	**GH¢ 587500**	**GH¢ 587500**	**GH¢ 587500**



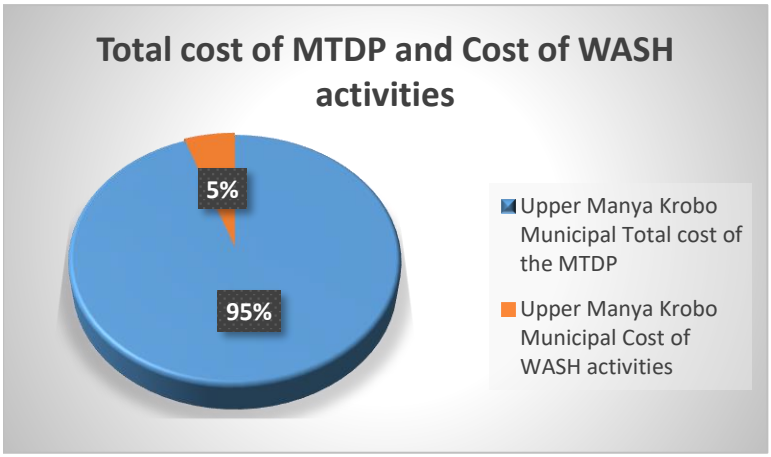
Source: Author's Compilation of Field Data, 2024

The data from Upper Manya Krobo presented a different dimension from that of Lower Manya Krobo in the allocation of financial resources for WASH activities in the MTDP. Similar to Lower Manya, analysing this data provides insight into local authority's prioritisation and allocation of resources to improve WASH services from 2022-2025. The budget allocated for 2022 WASH activities is set as **GH¢ 627,500** after which it declines slightly to **GH¢ 587,500** and remined stable from 2023 to 2025. The data reflects a deliberate approach concentrated on maintaining steady investment in WASH activities after an initial period of slightly higher budget. This approach is backed by the notion that consistent funding is critical for sustainability of WASH services. As noted by Smit et al. (2011, p. 37), stable funding is important to ensure that WASH infrastructure remains functional and that services are reliably delivered to communities. The projects and their accompanied budget allocations have been repeated from 2023 to 2025, hence, the stable nature of the trend as depicted in the trend graft above. This trend of the budgetary allocation in Upper Manya Krobo district suggests that the local authorities may be focusing on maintaining existing services rather than embarking on new large-scale projects.

Table 7:WASH Costs and Total MTDP costs-Upper Manya

Upper Manya Krobo	
Total cost of the MTDP (GH¢)	Cost of WASH activities (GH¢)
44,061,091.09	**2390000**

Figure 9: Pie chart indicating cost of MTDP and Cost WASH activities



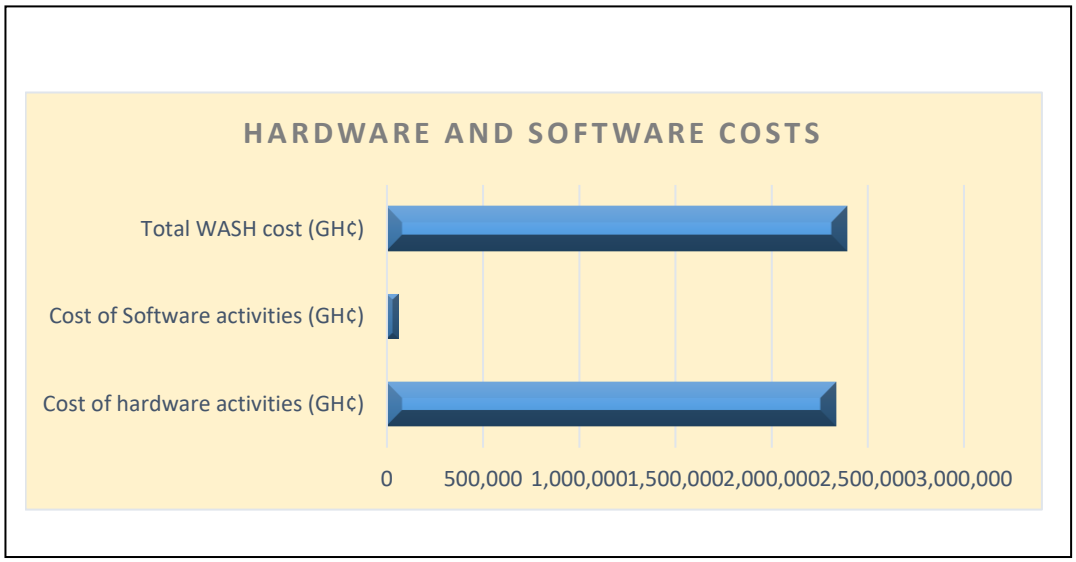
Assessing the proportion of the MTDP budget dedicated to WASH activities, the cost of WASH was divided by the total budget of MTDP, then multiplied by 100. Data shows that an allocation of 5.42% of the total MTDP budget allocation to WASH activities suggests that, while WASH is acknowledged as a necessary element of the local plan, it is not given priority in relation to other sectors. The 5.42% is relatively low especially given the critical role WASH services play in public health and economic development. According to World Bank estimates "the present value of additional investment in WASH is needed in WASH through 2030 […]" (Hutton and Varughese 2016 cited in Pories et al, 2019). Again, the 5.4% allocation contrasts with the global recommendation which advocate for a more significant investment in WASH to ensure sustainable development.

Table 8:Cost Of WASH Hardware And Software -Lower Manya Krobo Municipal

Lower Manya Krobo Municipal				
Hardware WASH activities	Cost of hardware activities (GH¢)	Software activities	Cost of Software activities (GH¢)	Total WASH cost (GH¢)
Repair of 10No. Boreholes, Drilling of 6no. boreholes with hand pumps and concrete platform, Procure 2No. Skip loaders sanitary tools and disinfectants/insecticide	2,332,000	Facilitate the establishment and training of WATSAN Committees, Organise public education on Food safety and hygiene	58,000	**2,390,000**

Source: Author's compilation of field data, 2024

Figure 10:Graph of Hardware and Software costs of Lower Manya Krobo



The cost of WASH activities was further analysed into categories: hardware and software activities. This was to understand the balance between infrastructure investment (hardware) and capacity building or behavioural change activities (software) in the WASH sector. From the total cost of WASH interventions of GH¢ 2,390,000, hardware component of the WASH activities was GH¢2,332,000 which accounts for approximately 97.5% of the total WASH budget. In comparison, software activities receive representing GH¢ 58,000 only about 2.43 of the total WASH budgets.

4.3 Implementation Strategies for WASH Interventions

The table below is an extract from the MTDPs of both Upper Manya Krobo and Lower Manya Krobo district indicating the WASH implementation strategies from 2022-2025.

Table 9: WASH strategies-Lower and Upper Manya Krobo Districts

Upper Manya Krobo District WASH Strategies (examples)	Lower Manya Krobo District WASH Strategies (examples)
• Encourage the construction of household latrines • Facilitate the completion and use of IPEP Toilets and First Ghana Toilets • Enforce sanitation bye-laws • Acquire final solid waste disposal sites • Construct boreholes facilities • Mechanize existing boreholes to increase assess to water • Form and train water management committees in all communities • Ensure periodic conduct of water quality test by all water providers	• Develop and implement District Water and Sanitation Plans (DWSPs) within MMDAs (SDG Targets 6.1, 16.6) • Provide mechanized boreholes and small-town water systems to unserved areas (SDGs Target 6.1, Target 6.1) • Promote Household Water Treatment and Safe Storage (HWTS (SDG Targets 6.3, 6.5) • Promote public-private partnership in water service delivery. (SDG Targets 6.a, 17.17) • Promote National Total Sanitation Campaign (SDG Target 6.2)

Source: Extracts from Lower Manya and Upper Manya MTDPs 2022-2025

From the data extracted from the plans above, both assemblies outlined strategies intended to improve WASH services as part of a larger initiative to meet the United Nations SDGs especially Goal 6 and its targets. In the area of water, both district strategies emphasize on increasing accessibility to clean water through the construction of boreholes, boreholes mechanization, training of WATSAN committees and enforcement of bye-laws. Lower Manya Krobo emphasizes on partnership with the private sector, to constructing projects linked to global standards and SDGs and targets ensuring the inclusion of the underserved populations. This demonstrates an effort to put itself within the global development framework and could attract international donor and technical expertise as projects aligned with the SDGs have the potential of receiving funding (Connor, 2015). Promotion of partnerships highlights the potential of improved efficiency and innovation in water service delivery (Bakker, 2013) but may also risk prioritizing profit over equity and potentially depriving underserved communities. Therefore, regular monitoring in these areas will be required to ensure equitable distribution.

On sanitation management, among Upper Manya Krobo's focus are promotion of household toilets, acquisition of waste land filled site and enforcement of sanitation bye laws. Enforcement of bye-laws is aimed at enhancing local compliance. Lower Manya Krobo on the other hand focuses on scaling-up sensitization campaigns, Promotion of National Total Sanitation Campaign and on Public-Private-Partnership. PPP reflects on a move towards decentralization and partnership of sanitation efforts (Ostrom, 1996). The increased involvement of non-state actors such as the private sector is a sign of growing focus towards sustainable development approaches that rely on multi-stakeholder participation. The formation of WASH management committees such WATSAN committees and training them in the WASH strategies of Upper Manya also signals a shift towards community led management. By training them, the district ensures the management and maintenance of the facilities are carried out by them.

4.4 Challenges and Opportunities of WASH Integration

The study after identifying the extent to which WASH issues were addressed in the local plans of Upper Manya Krobo and Lower Manya Krobo districts, key informant interviews conducted was to offer insights into challenges and opportunities associated with integrating WASH needs into local development plans. Presenting the findings thematically enables the organisation of complex data into categories. Thematic analysis as explained by Braun and Clark (2006, P.87) is widely used technique for identifying, analysing and reporting patterns within quantitative data.

Each theme in the findings is backed by direct quotation from the interviewees to give depth of what was said. By drawing on the experiences of participants, the study gives a better appreciation of the local context and practical realities of implementing WASH interventions. Patton (2014) posits that, key informant interviews and thematic analysis helps reveal not only what is happening but why certain issues persist, giving a deeper level of insight into the complexities of WASH integration at the local level.

4.4.1 Challenges of WASH integration

Funding Constraints

Funding constraints: It was one major constraint listed as a number one challenge by all informants for successfully incorporating WASH interventions into the local plans. The lack/inadequate funds hampers planning and the implementation phases of WASH projects leading to substandard projects. The interviews revealed that funding constraints impact the ability of the local authorities to plan and implement comprehensive WASH interventions.

One of the key informants stated: *"Inadequate funding and resources are often the major hurdle for local authorities to implement WASH initiatives because of competing priorities"* (Key informant, LMKM, 2024).

In the light of these findings, it was also evident in the Medium-Term Development Plan for Upper Manya where limited attention was given to WASH programs in the plan in terms of the number of projects and the resources allocated for WASH activities. As indicated by Andrews, Pritchett and Woolcock (2017) inadequate funding frequently leads to the underperformance of development interventions because government are unable to mobilize the required resources to meet their objectives fully. When probed further to find how financial constraints affect WASH integration, it was revealed that it affects the number of WASH projects in the plan as well as the implementation. As pointed out by one of the informants,

"We are constrained by the number of activities we want to put in the plan. We don't want the situation where we put 155 activities in the plan and at the end of the year, we are only able to implement 30 projects as it goes against the Assembly during District Performance Assessment Tool". (Key informant, LMKM, 2024).

Another informant indicated that inadequate funding sometimes alters the design of the project to suit the funds available. *"In certain cases, funding constraints force change the scope of planned projects. For instance, there may be an initial plan to construct a 20-seater Kumasi Ventilated Improved Pit (KVIP) toilet facility, however, upon assessing the availability of funds, 10-seater toilet will be constructed instead"* (Key informant, LMKM, 2024).

These finding challenges shows that RPM linear approach failing to accommodate the need for adaptability which is important for effective WASH implementation under limited resources. Despite these challenges, four of the informants highlighted strategic approaches being employed to mitigate the effects of funding constraints. These include seeking partnerships with private sector and NGOs. *"Some individuals and benevolent citizens supported and drilled boreholes in the middle belt. Growth Aid, Japan International Cooperation Agency and Volta River Authority have supported the municipality in constructing and repairing of boreholes and provision of refuse containers"* (Key informant, LMKM, 2024).

These strategies are often inadequate to fully reduce the funding gaps. According to Hutton and Varughese (2016), innovative financing mechanisms and stronger multi-sectoral collaboration are required to close the gap between available resources and financial requirement for effective WASH integration.

In addition to financial constraints, other resource constraints emerged from the interviews carried out. Two of the outstanding issues identified were unavailability of land and logistical constraints

hinder effective execution of WASH projects. Informants revealed that, securing land in densely populated areas is particularly challenging as land tenure in the enclave are possessed by families and making negotiations with owners of the land can be time consuming and costly. It is more challenging when it is for construction of public toilet or land filled site. As remarked by one of participants from Lower Manya Krobo, *"In the urban setting, because of the nature of the built environment, it is difficult to for households to construct household toilets. Land belongs to families, and nobody is prepared to donate their land for public toilet to be constructed even though it is their top priority"* (Key informant, LMKM, 2024).

McGranahan (2015, p.248) notes that the lack of suitable land can worsen existing public health issues by delaying the building of important WASH infrastructure. This contributes to the persistent open defecation in some areas which poses serious health risks in the communities.

Informants noted that even when funding is available, logistical challenges such as vehicles to carryout monitoring of WASH programs and public sensitization.

"The district is largely a rural district and sometimes it is difficult to reach remote areas to undertake programs and monitor the activities of Water and Sanitation (WATSAN) committees due to transportation challenges" (Key informant, Upper Manya Krobo, 2024).

Technical Capacity Constraints

Technical capacity challenges emerged as another key challenges from the interviews conducted. This leads to poor maintenance of infrastructure, hence unsustainable WASH projects. Some the informants stated that that lack of technical expertise in the "area mechanics" for the repair of boreholes.

"*Capacity building in terms of managing and maintaining boreholes requires expertise knowledge. It becomes more challenging when it comes to repairs of mechanised boreholes in the communities as we fall short of such expertise, and we have fall on our neighbouring Districts or region for support. This is expensive and time consuming. Most of our boreholes are non-functional and it is attributed to this challenge".* (Key informant, Upper Manya Krobo, 2024).

According to Moriarty et al. (2013), the success of WASH initiative heavily depends on skilled technical staff, including engineers, technicians and water resource managers. In areas where such expertise is lacking, local authorities struggle to implement even basic WASH interventions effectively. The same issue is echoed by Lockwood and Smits (2011) who highlighted that capacity is crucial for ensuring sustainability of rural water supplies as well as maintenance of existing

WASH infrastructure. As reported by key informants, due to technical challenges many of the WASH facilities were poorly maintained. This leads to frequent breakdown of borehole facilities which in turn disrupts service delivery and pass public health risk. The lack of skilled maintenance personnel often leads to rapid breakdown of WASH infrastructure particularly rural areas where resources for regular upkeep are limited. This finding is consistent with the experiences of many developing where limited technical capacity undermines the sustainability of WASH of projects.

Some informants mentioned reliance of external technical expertise particularly from NGOs like Growth Aid and Safe Water Network for repairs and maintenance of WASH facilities. "*We have worked extensively with Growth Aid, a Non-Governmental Organisation on WASH. So far as at last year (2023), they worked on 20 boreholes. Some were newly constructed, and others were repaired. They desalinated 2 of the boreholes to remove iron and salt content from them."* (Key informant, LMKM, 2024).

Even though external support can be beneficial in the short term, it often leads to dependency and undermine local ownership and sustainability. Cleaver and Toner (2006, p. 207) argue that, building local capacity is essential for long-term sustainability as reliance of external expertise can leave local authorities vulnerable when external support is no longer available.

Political Interference

One of the recurring themes from four of the key informants was the issue of political interference. This interference mostly disrupts the effective planning, implementation and management of WASH projects. The situation manifests itself in different ways including politically motivated decision making and the manipulation of project priorities for electoral gains. In many instances decisions about where to implement WASH infrastructure is driven by political agenda and not based on the needs of the community. Politicians often prioritize areas that are likely to yield electoral results leaving communities without basic WASH services.

*"In Ghana here, our political leaders do not value the importance of safely managed WASH services as they are not taking WASH issues very seriously. Sometimes, a project is proposed but they have a different agenda for their political gains. They want projects that will make them popular and win them votes" (*Key informant, Upper Manya Krobo, 2024).

This finding aligns with the work of Andrews, Pritchett and Woolcock (2017, p.126) who argue that political interference can skew the allocation of resources that undermine the distribution of public services. This can lead to inadequate infrastructure, poor management of WASH services and poor accountability. It was also revealed that, the appointment of unqualified personnel popularly known as *"party foot soldiers"* to manage WASH projects leads to poor decision making,

inefficiencies in construction and management of WASH projects and lack of accountability. This issue has been widely recorded in the literature on governance in developing countries where political loyalty frequently prevails over competence in the public sector appointments (Grindle, 2012, p. 40). Furthermore, one of the key criticisms of Rational Planning Model is the assumption of its technocratic approach where decisions made are based on objective analysis rather than political interest. However, this assumption is flawed as political power can influence the dynamics of resource allocation and prioritization thereby manipulating planning processes (Flyvbjerg, 1998). The challenge of political interference as indicated by the participants underscores this criticism where it assumes rationality in planning ignoring political interference in decision making in the public sector.

Low Community Participation and Engagement

One significant challenge mentioned by key informants as a challenge of WASH integration was the issue of low community participation and engagement. Participation according to Enserink et al. (2007) is defined as "the involvement of individuals and groups—i.e., the public or stakeholders that are positively or negatively affected by or are interested in a proposed intervention" (Enserink et al.,2007 cited in Jiménez et al., 2019, p.2). Participation by community members is important for the success and sustainability of projects and programs, yet in these study areas, inadequate engagement from local communities was recognized as a barrier to WASH integration. This makes their WASH needs not prioritized and integrated into the local plans. This situation is a common issue in developing countries where WASH-related knowledge is often inadequate and efforts to promote hygiene and sanitation practices face cultural and educational barriers.

"In one of our communities, we had to engage and sensitize them before they use the water facilities we constructed for them. There is a pond the community have been using over centuries which is believed is sacred. So, after constructing the boreholes for them, they were still depending on the pond due to inadequate engagement and traditional beliefs. We had to educate them before they started using it" Key informant, Upper Manya Krobo, 2024).

Low engagement with communities highlights one of the critiques of RPM for its inadequacy of addressing the social dimension of planning where decision making is top-down or expert driven instead of bottom-up. Therefore, raising awareness through sensitization is crucial in promoting community involvement in WASH initiatives as without adequate knowledge, communities are less likely to prioritize WASH projects. Inadequate involvement of communities leads to poor sense of ownership by community members and unstainable project outcomes.

4.4.2 Opportunities of WASH Integration

Strengthening collaboration with NGOs and other Development Partners

Key informants were again asked about opportunities of WASH integration and various key patterns were identified. One of such key opportunities identified was strengthening collaborations with NGOs and other development partners. NGOs have taken numerous roles in the area of WASH. According to Carrard et al., these roles can be classified into six (6) groups: facilitation and providing services, educating communities and building partnerships and network and enhancing the capacity of local authorities, carryout research and innovation and policy discussions (Carrard et al., 2009, p.3118). The respondents noted that NGOs and other development partners, in most cases have access to funds and technical expertise which can complement local efforts to integrate WASH needs into development plans. These partnerships can help fill critical resource gaps and increase WASH interventions in the local plans. According to Lockwood and Smits (2011, p.17), collaboration with external partners is important for building financial and technical capacities required for successful implementation of WASH interventions.

*"Safe Water Network is an NGO in the district and has supported the district water coverage over the past years. In the peri-urban areas, Safe Water Network is covering 3 communities namely Asesewa, Sekesua and Akateng providing small town water supply to the people" (*Key informant, Upper Manya Krobo, 2024).

As mentioned by Nyarko et al. (2010, p. 275), NGOs and international donors provide critical financial assistance for WASH projects in developing countries such as Ghana. In addition to the financial support, these organizations offer valuable technical expertise on board to the local interventions. Some of the respondents emphasized on the significance of building local capacity for management of water facilities and hygiene promotion programmes.

"Pencils of Promise is an NGO into Education operating in the municipality. After constructing school facilities, the also provide WASH infrastructure such as toilets and urinals, distribute sanitary pads and also educate studies and communities on behavioural change. This tremendously improved in schools in the district" (Key informant, LMKM, 2024).

"For management of water facilities, Safe Water Network have facilitated in the formation of Water and Sanitation Management Team (WATSAN) committee to control water facilities. There are water engineers among them, trained to undertake repairs on the facilities. They also collect money which is used to treat the water, pay the operators of the facility and maintenance." (Key informant, Upper Manya Krobo, 2024).

By teaming up with NGOs, local authorities can benefit from training and capacity building to support rural water supply interventions (Smits et al., 2011, p. 17)

Community Engagements

The interviews also disclosed that community engagement presents a critical opportunity for the promoting WASH integration. Many informants mentioned that local involvement play a key role in the success of WASH initiatives and their active participation is necessary for ensuring ownership and sustainability. The purpose of participation according to Sanoff (1999, p. 9-10) are engaging people in the design and decision-making procedures, providing people the voice in the design and fostering sense of community by uniting people to share goals and collaborate.

"Communities must understand the interventions and why it is needed so that they can buy into the idea. When people feel left out in decisions which concern their lives, you can provide a facility which will not be put into use. That is why promotion of households' toilets under Community Led Total Sanitation (CLTS), landlords must be involved" (Key informant, Upper Manya Krobo, 2024).

Community driven approaches are known to influence a more effective and sustainable outcomes because they are based on the needs of the beneficiaries. In the water sector Cleaver (1999, P. 598) views women's participation as both an effective approach to achieve goals and improving their empowerment. This highlights the importance of women's roles in constructing water facilities, which not only offers practical benefits, but also empowers them by promoting a sense of ownership and responsibility. This leads to efficient maintenance of the facilities. Additionally, this opportunity responds to one of the critiques of RPM where is there is the tendency to overlook local knowledge and expertise in favour of expert-led planning (Flyvbjerg, 1998). With community driven approaches such as CLTS, it gives a counterbalance of incorporating bottom-up approach within the local plans allowing communities to identify and implement sustainable WASH solutions.

Public-Private Partnership (PPP)

The potential to forge PPP was mentioned by respondents as an opportunity for WASH integration. According to Koppenjan and Enserink (2009, p. 285), PPPs are progressively seen as a way to encourage private sector investment in WASH infrastructure projects that lack public funding.

"I see it as a business opportunity for the private sector where a recycling plant can be set up. JEPORA ventures operating in Yilo Krobo Municipal depends on our market waste which is recycled into organic fertilizer" (Key informant, LMKM, 2024).

It is expected that, involving the private sector would attract essential investment, improve access, and elevate the quality of water supply in developing countries, same way to the improvement seen in the developed countries. (Obosi, 2021, p.217). Additionally, studies by Tetteh et al. (2022, p. 53) has indicated that, the participation of the private sector in providing and management of urban water supply in various African counties has increased substantially in response to address inadequate access to water targeted at reducing the gap and improving access to water.

PPP can promote innovation and more resources to WASH projects in order to reduce the gap between limited public funds and the growing demand for WASH services. They also highlighted on the regulatory framework on PPP Act 2020 (ACT 1039) which ensures the interest of the public and the private sector are equitable. Additionally, cross-collaboration with other sectors such as education and health were mentioned as collaboration between these sectors can go a long way to addressing WASH related challenges leading to more effective solutions.

4.5 Factors Influencing the Integration of WASH needs into Local Plans

4.5.1 Community Needs and Demands

Informants mentioned that for WASH issues to be successfully integrated, it depends on the needs and demands of communities. These needs and demands are prioritized and allocated resources for implementation. When asked how communities are involved in WASH planning, informants stated that through community engagements (Town hall meetings, DCE/MCE visits to communities) and also through the WATSAN committees and Assembly members.

One of the participants from Lower Manya Krobo stated "*All activities in the plan are demand driven. Community needs are collated and prioritized and integrated into the local plans".* (Key informant, LMKM, 2024).

In Lower Manya Krobo, another informant stated that *"apathy on the part of communities is making them not be involved in the WASH planning. When needs are not met repeatedly, it leads to fatigue in giving their inputs for the plan preparation. This makes them lose trust in the local authorities and may feel reluctant to give their inputs on WASH.* (Key informant, LMKM, 2024).

Despite the acknowledging of the essence of addressing community requests, resource constraints limit the ability of local authorities to respond to the growing demands and needs of the people. Linked to the community demands, key informant cited disease outbreaks as another influencing

factor to WASH initiatives into the local plans. Periodic outbreaks of waterborne and sanitation related illnesses such as cholera and diarrhoea could trigger emergency response from the local level, national and external partners such as NGOs and international organisations. An informant remarked,

"Covid-19 for instance brought some interventions related to WASH. Ghana National Petroleum Corporation drilled boreholes post-covid-19 era and this year (2024) we are getting some water facilities from the District Assembly Common Fund Secretariat" (Key informant, LMKM, 2024).

Adding to that, another informant indicated that reports from health directorate as a factor. "*The health director reported to the General Assembly about the rise in typhoid cases. It therefore meant that we drink dirty water and eat unwholesome food. Therefore, had to scale up the activities on WASH. We have the biggest water treatment plant in West Africa, however people connecting water to their homes pass the pipes through gutters which filled with waste, affecting the quality of water in their homes"* (Key informant, LMKM, 2024).

Therefore, according to the informants, moments of crisis often lead to increasing integration and funding for WASH issues.

Lastly, another mentioned that WASH issues in the plans also depends on the benevolence of individuals and NGOs. *"They may not necessarily give you prior knowledge before coming but you cannot turn them away because you didn't plan for plan. This accounts to the disparities of activities captured in the annual action plans"* (Key informant, LMKM, 2024).

4.5.2 **Government policies and Global Agenda.**

The interviews revealed that national directives such as the national development policy frameworks and international commitments. *"The integration of WASH issues in the development plans is mandatory under the Medium-Term National Development Framework as local plans have to be aligned with national policies"* (Key informant, Upper Manya Krobo, 2024).

Global frameworks such as SDGs, especially Goal (6) plays significant role in WASH integration at the local level. The district strategies are linked to the SDGs and targets. Most often, these frameworks are not fully implemented due to inadequate funding.

Chapter 5

Summary of Research findings, Recommendations and Conclusion

The study sought to explore the integration of WASH needs into the local plans of Upper Manya Krobo District and Lower Manya Krobo Municipal. The findings were based on the blend of document review and key informant interviews. This section outlines research findings focused on the identified challenges and taking advantage of opportunities to promote WASH integration. The study uncovered challenges of WASH integration into the local plans. Funding constraints was consistently mentioned as a key challenge as local authorities heavily rely on government funds such as District Assembly Common funds, Funds from District Performance Assessment Tool and donor funding. These funding are mostly inadequate to meet the needs of the people leading to limited budget allocations for WASH activities. It was clearly shown in the case of Upper Manya District during the document analysis of the MTDP where only 5.4% of the total MTDP budget was dedicated for WASH activities. Limited funding also affected the WASH trends in the action plans of the two assemblies. Political influence was also mentioned as a challenge which mostly affect the planning process and allocation of resources. This leads to efficiencies of WASH initiatives.

Notwithstanding these challenges some opportunities to improve WASH integration into the local plans were identified. One of such opportunities identified was partnership and collaborations with NGOs and the private sector. These collaborations could bring forth the much-needed funds and technical expertise to bridge the funding and technical expertise gap. Promotion of community engagement and participation could encourage behavioural change around sanitation to promote local knowledge and ownership of sanitation. Although informants strongly hold Community engagement and participation as an important component in WASH, not much attention was given to software activities in both plans. Low community engagement and participation was mentioned to be generally low as community members were not sufficiently informed or engaged in the planning, design and execution stages which mostly affect ownership and sustainability of the projects.

Findings on factors influencing WASH integration into local plans, community needs and demands was identified as key role in shaping the priorities of local authorities on WASH. Also, national policy frameworks and global agenda were identified to influence WASH initiatives as

well as the benevolence of people who want to contribute towards developing their communities. Disease outbreak mostly trigger rapid response from local authorities at both local and national levels highlighting the importance of WASH in promoting public health.

This research provided important insights on the extent to which WASH needs are incorporated into local plans in Lower Manya Krobo and Upper Manya Krobo districts, challenges and opportunities. From the results of the study in Lower Manya Krobo and Upper Manya Krobo, both district plans show cased increased focus on WASH infrastructure (Hardware activities) with little attention to capacity build and community engagements (software activities) which from the key informant interviews, it came out strongly as an integral part of WASH for ensuring sustainability of WASH infrastructure. There is the need therefore to make necessary provision for software activities. Funds and logistics directed towards public campaigns and sensitization should be increased to promote behavioural change around hygiene education in the communities. McMicheal (2019, p. 2) notes that globally, one of the aims of School WASH initiatives is to "influence hygiene practices of parents and siblings thereby children at as agents of change in the households and communities". Allocating adequate funds for sensitizations and campaigns will promote community participation creating demand for better sanitation and hygiene.

Additionally, the study unveiled significant challenges related to funds for the districts especially Upper Manya district. Over reliance on donor support or external funds can lead to unstainable outcomes as resources are mostly not predictable. The study has also indicated that, integrating WASH initiatives with other areas such as health and education have implications for the success of the interventions as it can improve their impact and effectiveness. For example, providing adequate WASH services in Schools can improve students' health and their school attendance. From the study, promotion of community engagement was identified as one of the main challenges of WASH integration. Without people accepting WASH interventions, they will fail to achieve sustainability of the projects and programmes. Therefore, policies should prioritise community engagement in planning, design and execution of WASH interventions. As noted by Sara and Katz (2004, p.6) communities need to participate fully in planning for sustainable services. This re-echoed by Cleaver (1999) who highlighted that local participation promotes a sense of ownership and responsibility among communities. Rational Planning Model aligns with the steps required to integrate WASH issues into local plans highting the need to be goal-oriented to address logistical and resource constraints. This model receive criticisms for the assumption of stable and

predictability which my overlook the complexities of political influence and low community engagement and participation the study uncovered.

5.1 Areas for Further Research

Several areas for further research emerged

Firstly, impact assessment on existing WASH interventions is needed to examine the impact of WASH in the study areas. The development plans reviewed terminates in in 2025 and therefore assessing the impact the WASH activities implemented will be important. This will assist in identifying WASH strategies that are successful and areas for further improvements in the future. Secondly, the impart of NGOs and other Development Partners on sustainability of WASH initiatives. Studies could centre on the extent to which these partners contribute to the sustainability of WASH infrastructure, capacity building efforts of local authorities and community empowerment to maintain these systems. Last but not the least, further research on gender and WASH integration is an area researchers can investigate. Even though gender was not specifically covered in this study, it is an essential part of WASH especially how women and girls are affected by water shortages, poor sanitation and hygiene practices. The study could investigate the gender dynamics of WASH integration, examining how gender policies and practices can be integrated and how gender is mainstreamed into WASH initiatives.

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Appendix 1

Checklist for Local Plans Document Review

Prioritised WASH issues	**Water Services and management**	**Sanitation/hygiene Services and management**	**Financing**
Hardware, software, commodities – (value chain)	Water supply: infrastructure (hardware) and systems for households, institutions and communities	Sanitation: infrastructure (hardware) for households, institutions, communities · Infrastructure for solid and liquid waste management (collection, containment, treatment and disposal)	Investment, operations and maintenance, large capital and maintenance costs, support or software costs
	Commodities: point-of-use water treatment technologies (chlorine, filters) and water storage containers	Commodities: Distribution of hygiene products (soap, menstrual pads, handwashing facility components, such as containers)	
	Support/Software: water safety campaigns, training, marketing	Support/Software: Handwashing campaigns, promotion of hygiene practices, sanitation marketing	

Adapted from WASH Planning tool kit (NDPC, 2021)

Appendix 2

Interview Guide for Key Informant Interviews

Personal Data (Section A)
Name:
Sex:
Department:
Position:
Number of Years served in that position
Mobile number
Email:

Section B
1. Describe the present WASH situation of the District/Municipality
2. What are your roles and responsibilities in addressing WASH issues
3. How are local communities involved in WASH planning and decision making?
4. What are some of the influential factors driving the integration of WASH issues into local plans?
5. what do you think are the challenges of WASH integration into local plans?
6. How do financial and other resource constraint affect WASH integration?
7. What do you think are some of the opportunities of the integration of WASH issues into local plans in the district/municipalities
8. Describe any successful intervention implemented that have improved WASH in the district/Municipality
9. What are some of the best strategies for promotion of WASH in the local plans?
10. What would you recommend addressing WASH challenges in the district?
11. Do you have anything else to add that we have not covered?