ELIMINATING OPEN DEFECATION IN AFRICA: A DOCUMENTARY REVIEW ON THE LESSONS LEARNED BY THE REPUBLICS OF THE GAMBIA AND SIERRA LEONE

BY

DEMBO FATTY

AN INDEPENDENT STUDY SUBMITEED IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE DEGREE OF MASTER OF PUBLIC HEALTH IN GLOBAL HEALTH

FACULTY OF PUBLIC HEALTH

THAMMASAT UNIVERSITY

ACADEMIC YEAR 2022

THAMMASAT UNIVERSITY
FACULTY OF PUBLIC HEALTH
INDEPENDENT STUDY

BY

MR. DEMBO FATTY
ENTITLED

ELIMINATING OPEN DEFECATION IN AFRICA: A DOCUMENTARY REVIEW ON THE LESSONS LEARNED BY THE REPUBLICS OF THE GAMBIA AND SIERRA LEONE

was approved as partial fulfillment of the requirement for the
Master of Public Health in Global Health

on December 16th , 2022

Chair

(Dr Andrew Corwin, Dr PH)

Member and Advisor

(Dr. Rodger Doran, MB BS, DTMH)

Member

(Associate Professor Uma Langkulsen, PhD)

Dean

(Associate Professor Sasiporn Taptagaporn, PhD)

ABSTRACT

Background. For the past years, open defecation has been a long-standing public health challenge when it comes to environmental sanitation and hygiene. According to WHO and UNICEF, Sub-Saharan Africa bears the greatest burden of people practicing open defecation after Central and South Asia. The main purpose of this study was to share lessons from The Gambia and Sierra Leone in addressing the elimination of open-defecation practices by 2030.

Methods: The study was a structural documentary review for a comparative analysis, where country selection criteria were used to select The Gambia and Sierra Leone in relation to similarities and differences of their national policy, strategy, implementation approaches, social determinants, and community empowerment in addressing the elimination of open defecation. The study was carried out between June 2022 and December 2022. The web searches yielded a total of 95 articles. 60 articles were left after duplicates and items that don't match the requirements for inclusion in the full text are removed. After selecting papers that did not fulfill the inclusion criteria based on a full text review of the abstract, 40 articles were left for the study's full text review.

Findings: When it comes to policies, strategies, and implementation methods for reducing open defecation, The Gambia and Sierra Leone share a lot in common. The Gambia has social factors and community empowerment to address the practice of open defecation, however the study was unable to locate data on community empowerment in Sierra Leone.

Conclusion: The reduction of open defecation behaviors in the nation is strongly correlated with the national initiatives that were carried out. More research is needed in the future, even though the findings may be restricted to establishing the availability of national papers on sanitation and hygiene and the elimination of open defecation practices.

Keywords: Elimination, Open defecation, Community Empowerment, Gambia, Sierra Leone, Lesson learnt, Social Determinants, Policy, Strategy.

ACKNOWLEDGEMENTS

Am pleased to express my sincere appreciation and gratitude to my supervisor Dr. Rodger Doran for his technical and professional advice and time during the course of my independent study both the proposal and final completion. I also extend similar thanks to Associate Professor Uma Langkulsen for her professional advice and patience in the process of developing my study proposal is commendable.

Secondly, I would to thank Dr. Andrew Corwin who also doubles as the chair for the examination committee for his technical and professional advice.
Equally, to Assistant Professor Li Liang for her support, guidance, and encouragement from the inception of the program to its completion, and to all the academic and support staff of the Faculty of Public Health, Global Health program for their valuable efforts to the success of my academic achievement.
Again, I would like to thank the Thammasat University authority for creating a conducive enabling environment for students learning.

My profound thanks to Thailand International Cooperation Agency (TICA), for financial support to pursue my MPH program in Global Health and the Government of The Gambia.
Finally, I thank my family and friends for their morals and words of encouragement throughout the period of the study.

Dembo Fatty

TABLES OF CONTENTS

Pages

LISTS OF TABLES

LISTS OF FIGURES

LIST OF ABBREVIATIONS

No.	Symbols/Abbreviations	Terms
1.	AABA	Adolescent Against Bush Action
2.	AMCOW	African Ministers Council on Water
3.	DHS	Demography Health Survey
4.	FMM	Finance Ministers Meeting
5.	GDP	Gross Domestic Product
6.	GBoS	Gambia Bureau of Statistics
7.	GoTG	Government of The Gambia
8.	HMIS	Health Management Information System
9.	JMP	Joint Monitoring Program
10.	MDG	Millennium Development Goals
11.	MICS	Multiple Indicator Cluster Survey
12.	OD	Open Defecation
13.	ODF	Open Defecation Free
14.	NDP	National Development Plan
15.	PRISMA	Preferred Reporting Items for Systematic Review
16.	SDG	Sustainable Development Goal
17.	SWA	Sanitation and Water for All
18.	UN	United Nation
19.	UNDP	United Nations Development Program
20.	UNICEF	United Nations Children Fund
21.	WHO	World Health Organization
22.	WASH	Water Sanitation and Hygiene

CHAPTER 1
INTRODUCTION AND BACKGROUND

1.1 Introduction

The United Nation General Assembly recognized water and sanitation as a basic human right through a Resolution 64/292 on the 28 July, 2010 (UN 2014), and called for global partnership and efforts to come up with action oriented to provide and promote safe, clean, accessible and affordable water sanitation and hygiene services at all levels. In 2015, the UN Deputy Secretary General made a commitment on behalf of the UN Secretary General to the elimination on the practice of Open Defecation by end of 2030 under the Global Agenda for Sustainable Development Goal. (UN, 2014).

For the past years, open defecation has been a long-standing public health challenge when it comes to environmental sanitation and hygiene. From my experience, many households in rural communities don't have a space where they can defecate or access to public toilets because of user fees. This forces many families to practice open defecation, exposing them to sanitation and hygiene-related diseases, and loss of human dignity. For women and girls, there are additional risks of sexual harassment and assault. This became interesting to me as a public health officer within the Ministry of Health The Gambia, to develop strategies and measures, based on lessons learn to eliminate the practice of open defecation (OD) in my country and West Africa as a whole.

From the Global Health perspective, achieving the elimination of open defecation will promote human equality and equity, dignity, increase socioeconomic growth, nutritional outcome, quality education and health, community empowerment and wellbeing. It will also promote intersectionality, as benefits will also be seen by other public health programs that depend on access to safe water and sanitation for their success, such as nutrition and communicable disease control.

Therefore, this study made a comparison between The Gambia and Sierra Leone in their progress towards addressing Open Defecation as defined in the SDG targets and goals by 2030.

1.2 Background

1.2.1 The WASH sector at global level

WASH is an acronym for "water, sanitation and hygiene". It is widely used by the non-governmental organization and aid agencies particularly in the developing countries. Currently, 1.7 billion people are estimated to lack basic sanitation services and over 2 billion people live in water-stressed countries. This is expected to worsen in many regions as result of climate change and population growth (WHO, 2022). It is also estimated that from 2000 to 2020, globally the number of people practicing open defecation has reduced from 1,229 million to 494 million, showing a decline of 37 million people per year globally (WHO/UNICEF JMP, 2020).

According to WHO and UNICEF, Sub-Saharan Africa bears the greatest burden of people practicing open defecation after Central and South Asia. From 2000 to 2015, the number of people practicing open defecation in sub-Saharan Africa increased from 204 million to 220 million, despite the significant decrease in global open defecation (WHO/UNICEF. 2017).

Lack of adequate water and sanitation account for 829,000 deaths in low-middle income countries, which represents 60% of the total diarrheal deaths. In addition, efforts to eliminate neglected tropical diseases such as Trachoma and Schistosomiasis are constrained by poor sanitation and hygiene services and practices. (WHO, 2022)

Figure 1.1 below shows the distribution of countries that are widely practicing outdoor open defecation, particularly those in Sub-Saharan Africa. It also illustrates an increase of open defecation in sub-Saharan African countries rather decreasing compare to other parts of the world.

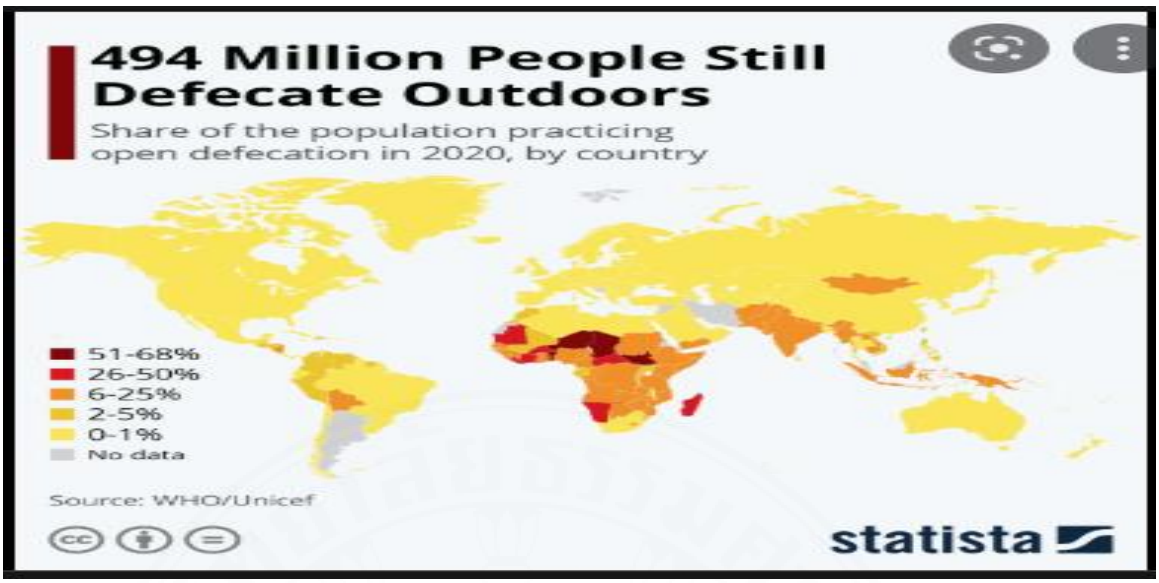

Figure 1.1: Open defecation practice globally (Belay et al 2022)

Figure 1.2 below shows progress towards universal access to safely managed sanitation in the world. In many countries, progress is too slow (20), some countries are going backward (6) and no countries are on track to achieve their sanitation and hygiene targets.

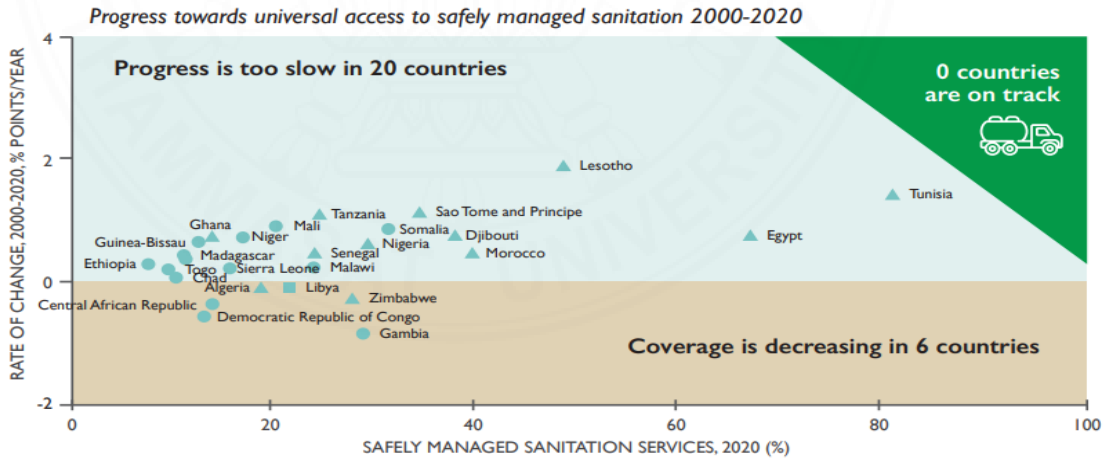

Figure 1.2 Progress towards universal access to safely managed sanitation. (AMCOW 2018-2030)

1.2.2 The WASH sector in The Gambia

The Republic of The Gambia is one of the smallest countries in Africa, stretching for only 450km along the river Gambia with a land area of 10,689 square kilometers. The country fronts the Atlantic Ocean and is surrounded by Senegal on all sides. It has a population of 2.4 million and is one of the most densely populated countries within Africa, with 57% of the population living in urban and peri-urban centers. Tourism and agriculture are the dominant sectors in the economy, accounting for 32% of the GDP. (World Bank, 2022). The climate is tropical, with a wet season between June and October. (Government of The Gambia, 2020).

The Ministry of Health has primary responsibility for the coordination, implementation and supervision of WASH services, in collaboration with other relevant government ministries and the non-government sector across the country (National Policy for Sanitation and Hygiene, 2020).

High levels of population growth and ongoing rural-urban migration have continued to put pressure on WASH services in The Gambia. In order to accelerate progress towards the 2030 SDG targets, WASH sector targets were key outcome indicators in the 2018-2021 National Development Plan (NDP 2018-2021). In line with the NDP strategic vision, The Gambia has made remarkable improvement with population access to basic drinking water supplies (90%), which is in contrast to poor gains in access to basic sanitation and hygiene services, which were 47% in 2018 to 63% in 2021 and 31% respectively WHO/UNICEF/ JMP 2021).

In addition, as shown in Figure 1.3 below, access to proper hygiene practices stands at 31%, while 1% of the total population still practice open defecation, most of whom are in the rural areas. Appendix A of the study provides data on the open defecation rate for The Gambia from 2015 to 2020.

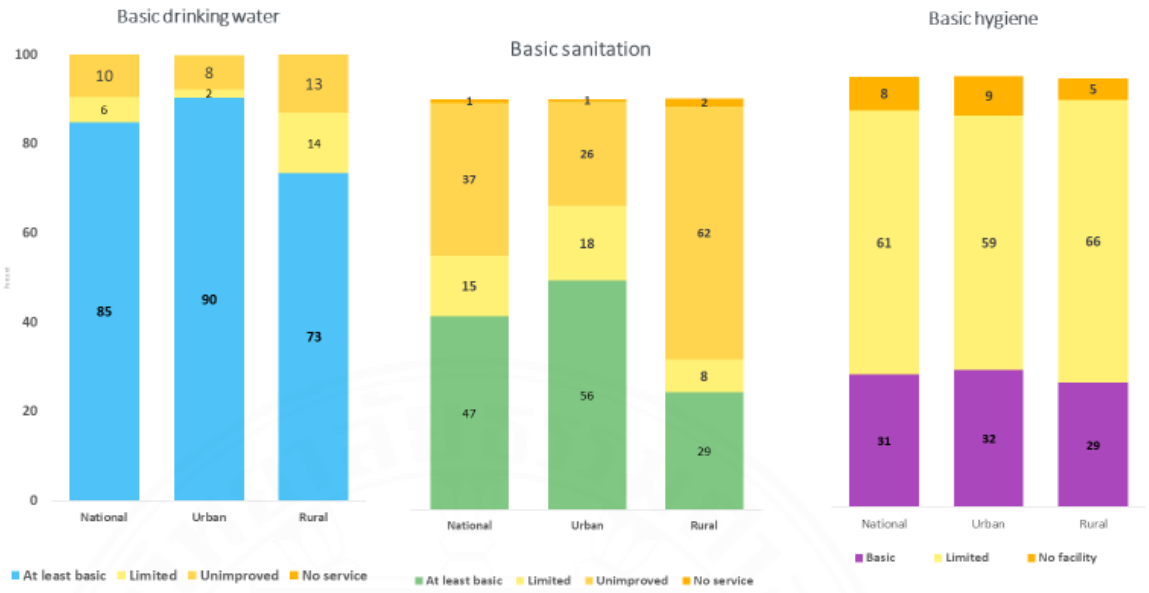

Figure 1.3 Water sanitation and hygiene situation in the Gambia (MICS, 2018)

According to the Sanitation and Water for All Report (2019), The Gambia loses 638 million Gambian Dalasi (GMD) each year (equivalent to 12% of yearly Gross Domestic Product) as a result of poor water, sanitation and hygiene services. This means that the unserved population loses an average of GMD 350 (USD 13.5) per person annually. Poor sanitation and hygiene have significant negative effects on the country's economic productivity, particularly when people are sick as a result of poor WASH services and practices. (FMM, 2020).

1.2.2.1 Journey to end open defecation in The Gambia

The journey to end open defecation in The Gambia was guided by a developed national Roadmap with a participatory process by all WASH sectors including public and private sectors, development partners for a provision and sustained water and sanitation services in the country (Government of The Gambia, 2019-2021).

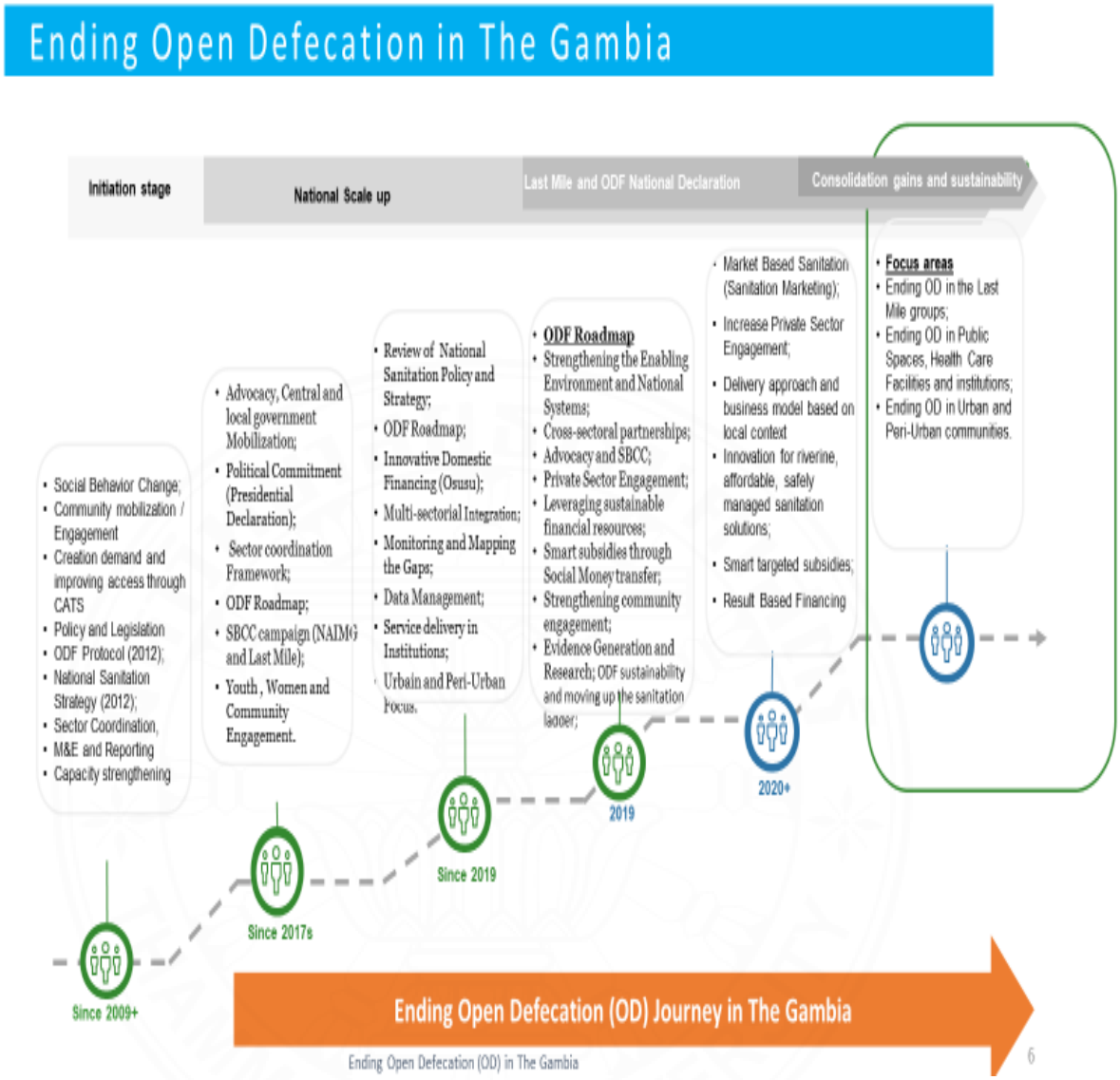

Figure 1.4 Open defecation Elimination Journey in The Gambia (Government of The Gambia, 2019-2021).

The diagram below represents graphically the implementation arrangements from the central to community level. The Central level comprised of national steering committee comprising of ministers, national technical working group, head of CSOs and development partners. The regional level comprised of Regional Health Directors and WASH stakeholders. The district level comprised of Multidisciplinary Facilitation Teams (MDFT) or extension workers, including community health workers, public health officers, teachers, and agricultural workers amongst others. The Community comprises of the village Alkalo (head of the village/community)

Village Development Committee, Water and Sanitation committee (WATSAN) and the village support groups.

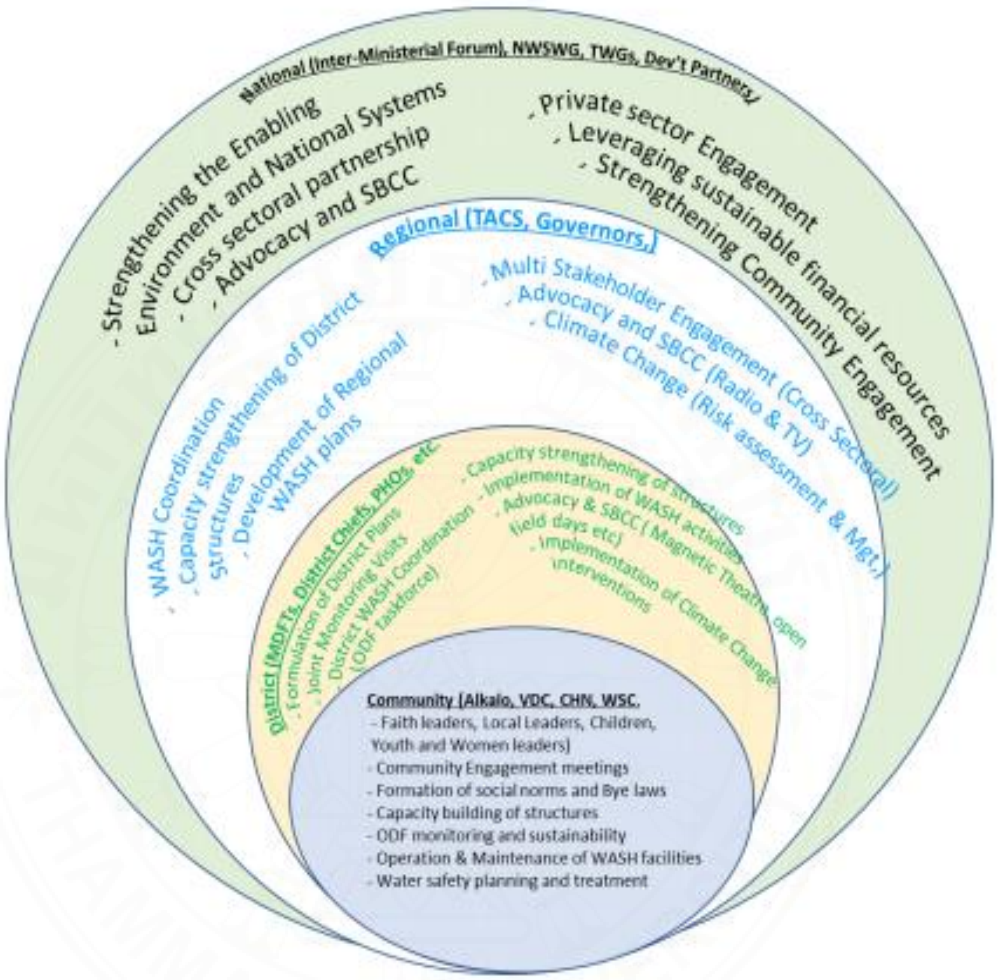

Figure 1.5 Implementation arrangement to ODF elimination in The Gambia. (Gambia National ODF Roadmap, 2019-2021).

1.2.3 The WASH sector in Sierra Leone

Sierra Leone is a country within West Africa, with a land area of about 27,699 square miles and located on the north of the equator. The country has a population of 8,338,087 (Worldometer, 2022). The country faces the Atlantic Ocean and has land borders with The Republic of Guinea (north) and Liberia (south).

In Sierra Leone, the Directorate of Environmental and Sanitation under the Ministry of Health is responsible for the coordination and supervision of Water Sanitation and Hygiene services in the country. There are various sectors partnering with the Ministry of Health to implement sanitation and hygiene services, such as all government ministries, Local Government councils, Non-Government Organizations, UN agencies and Donor agencies. Funds for the sector come from the budget of the partner Ministries, Departments and Agencies (MDA) (Government of Sierra Leone, 2015 -2020).

The Republic of Sierra Leone has been facing major challenges of water sanitation and hygiene (WASH) due to the lack of safe and clean water resources, inadequate use of hygiene practices and poor accessibility of basic sanitation services. While acknowledging the importance of basic WASH in improving health, welfare, socioeconomic, nutrition and the overall development, the country remains far from reaching the global SDG6 target by 2030. (Government of Sierra Leone, 2015-2020). To date, only 53% of the country benefits from adequate drinking water sources, this implies that 47% of the population still drinking from unsafe source (WHO/UNICEF, 2021).

In 2020, 16% of the population in Sierra Leone are still practicing open defecation (WHO/UNICEF, 2021). Appendix A of the study provides data on the open defecation rate for Sierra Leone from 2015 to 2020. Deaths from diarrheal disease in Sierra Leone reached 5,275 or 8.70% of total deaths, which ranked the country number 8 in the world for deaths from diarrheal disease, (WHO, 2020).

The government has made huge investments in the WASH sector ((Water, Sanitation and Hygiene Sector Annual Performance Report, 2017), but the expected results of improving water sanitation and hygiene services are far from reaching the target by 2030 (Government of Sierra Leone, 2017).

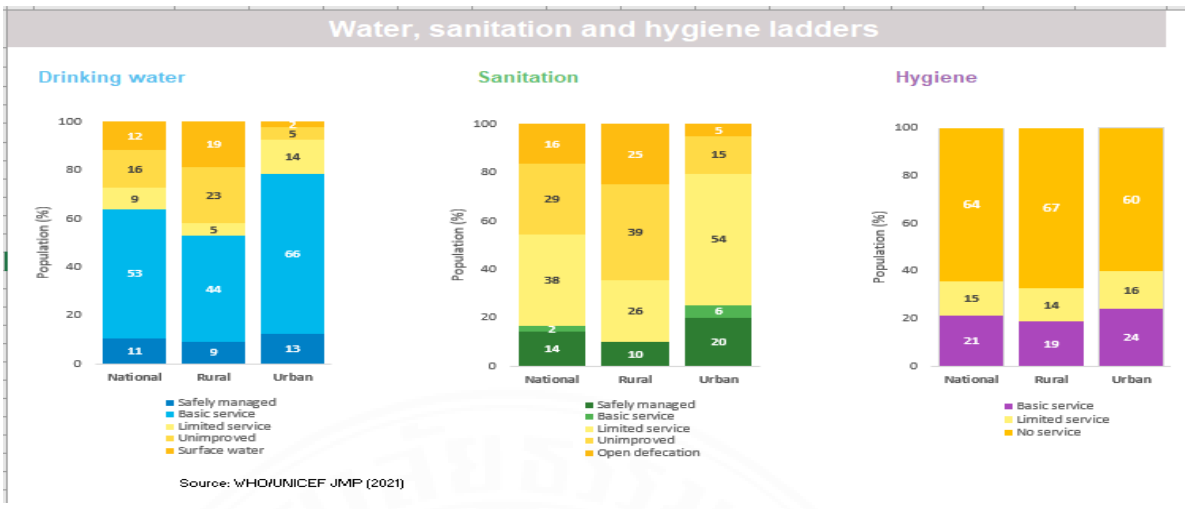

Figure 1.6 WASH data in Sierra Leone (WHO/UNICEF JMP, 2021.)

Figure 1.6 illustrate the Water Sanitation and Hygiene progress in Sierra Leone, particularly open defecation, which show 16% coverage in the country, 53% for drinking water and

Figure 1.7 below shows the implementation framework for the Directorate of environmental health and sanitation implementation patterns which all local council, municipalities, districts, the chiefdoms and the communities should now channel their communications and program to the Directorate under the Ministry of Health and Sanitation for effective and efficient service delivery.

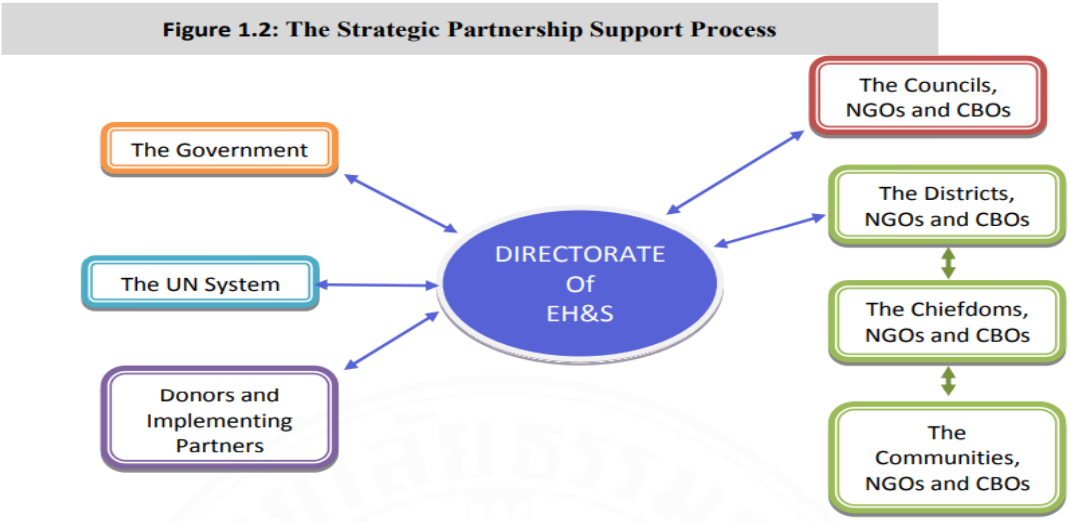

Figure 1.7 Implementation framework for the Directorate of Environmental Health and Sanitation (Government of Sierra Leone, 2015-2020).

1.2.4 Open defecation and its relationship to human health

Humans defecating in an open space rather than in a toilet is considered as ‘’open defecation’’. Open spaces such as fields, bushes, forests, ditches, streets, and canals may be chosen by people depending on choice and availability. Usually, people practice open defecation due to lack of access to toilets, but for some cultural groups, it is their preferred way manage human waste, based on their traditional beliefs (WHO, 2019). According to the latest WHO/UNICEF Joint Monitoring Report (2021), 494 million people practice open defecation, most of these people (92%) live in rural areas and nearly half of them live in sub-Saharan Africa (WHO/UNICEF, 2021, Belay et al 2022) and 13% of all women do not have a safe place to defecate, which causes lack privacy, especially while menstruating, and exposes them to sexual violence (Awasthi & Suryavanshi, 2017).

Ongoing population growth and urbanization put constant pressure on the provision and maintenance of WASH services. The environment becomes contaminated with disease-causing pathogens when human feces are present in open

spaces. Diseases such as salmonella, dysentery and typhoid are caused by ingesting water and food that are directly or indirectly contaminated with feces.

Direct exposure to human excreta is another cause of infection, where parasites such as hookworm can penetrate the skin. Lack of poor household water sanitation and hygiene are associated with skin diseases such as pinworm and scabies and eye diseases such as conjunctivitis and trachoma. In addition, breeding of some vectors of disease such as rats, flies and mosquitoes is enhanced by contaminated environments. The F-diagram as proposed by Wagner and Lanoix in 1958 (see Figure 1.6 below) demonstrates the transmission of a disease from an infected face through either contaminated hand/finger, flies, fluid food and field (Parimita Routray, 2017).

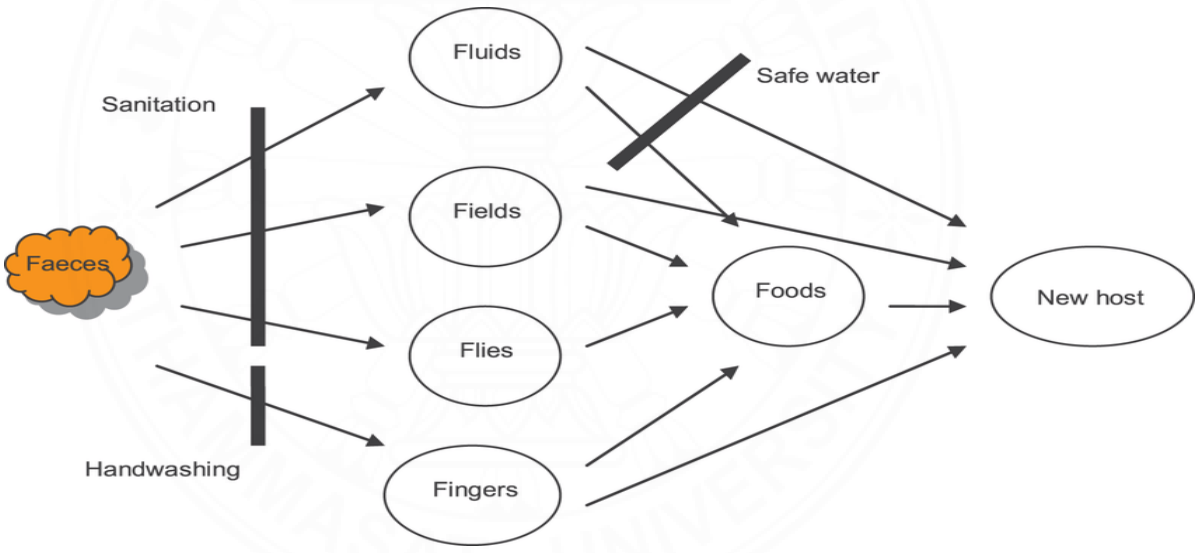

Figure 1.8 F-diagram of fecal-oral routes for disease transmission (Parimita Routray, 2017).

1.2.5 International initiatives

1.2.5.1 The Campaign to Eliminate Open Defecation

On the 22 March, 2013, in a message delivered to mark World Water Day 2013 at UN Headquarters in New York, US, UN Deputy Secretary General Jan announced a renewed effort to achieve progress on sanitation. The ‘’Call to Action’’ aims to improve hygiene, change social norms and improve management of human

waste and wastewater, with the overall goal of elimination open defecation by 2025. (UN, March, 2013).

According to UNICEF, the world is currently off-track in meeting the global target to eliminate open defecation by 2030. In order to successfully eliminate open defecation, at least 60 million people need to be persuaded to stop the practice of open defecation each year between 2015 and 2030. By 2018, reduction in people using open defecation was running at only 20 million per year, so three times the current effort is needed to end open defecation by 2030 (UNICEF game plan, 2018).

However, even though it is far reaching to achieved ODF by 2030, the ODF Campaign initiatives have come to build on and strengthen partnerships already made by Member States of the United Nation through other WASH initiatives developed prior to 2015, such as the Sanitation and Water for All initiative.

The aim of the campaign was not to create a new program or strategies but to strengthen already existing structures or funding mechanism to focus on generating action at community level by engaging community leaders, schools, local institutions and citizens with support from government and international organizations. The campaign also emphasized the role of the Civil Society Organizations to advocate to break the vicious cycle of open defecation and make it an issue of public concern. (UN, March, 2013).

1.2.5.1.1 International Campaign Approaches

i) Mobilizing communities and promoting people-centered approaches

The people-centered approach in the promotion of sanitation and hygiene is an essential element that must be put into consideration when implementing programs. Groups such as religious, civic organizations, educational, sports, entertainment, commercial, and other stakeholders can help to influence and transform society. Community groups, ranging from civic, religious, educational, commercial, sports, and entertainment, can also demonstrate people's rights and responsibilities to their

basic services and respond and other stakeholders can all help to transform society and influence policy and behavior.

ii) Building partnerships across sectors and disciplines

Building partnership between public and private sectors are a key fundamental to connects and broaden the sanitation and hygiene sectors for resource mobilization. Cognizant of the fact that, WASH as a program cannot work in isolation from other programs such as social and economic sector if the goal of WASH campaign is to be achieved. In addition, this will bring together policy makers, practitioners, community groups and those working with health, nutrition, environment and education.

iii) Institutional reform and Promoting management

Many times, governments and institutions are failing to put the rights of the people at the center, often paying more than the rest of society for water and sanitation services. Unless there is a shift in the trajectory by involving people at the center, the problem will continue to persist and cause water sanitation and hygiene conflict among communities and broaden the gap between the poor and rich. Therefore, strengthening the governance structures and accountability for service delivery would step in closing the gap between the marginalized and the rich.

iv) Responsible Mass media

For a wider coverage of influencing public opinion and behaviors on water sanitation and hygiene, mass media such as radio, television, etc, have an important role to play. Many believe particularly the politician, that mass media is a very powerful platform for advocating and influencing policies and resource mobilization for activities (Water Supply Sanitation and Collaborative Council, 2018).

1.2.5.1.2 Other international initiatives towards the elimination of open defecation

There are several other International Initiatives aiming to accelerate progress in the WASH sector, including the elimination of open defecation. They are included but not limited to those in the table below (e.g. bilateral and regional initiatives are not included).

No.	International Initiatives to improve Sanitation and address Open defecation
1.	**World Toilet Day:** In 2013, The United Nation General Assembly recognized World Toilet Day to be celebrated internationally as an action to break the traditional and cultural taboos surrounding the use of toilets and draw attention to the global sanitation challenges. Now, this day is usually celebrated on the 19th of November of every year.
2.	**UN Secretary General's Call to Action on Sanitation:** On the 22nd March, 2013, UN Deputy Secretary-General initiated and recognized that, sanitation and hygiene is critical in combating poverty and achieving the SDGs. Therefore, he calls on to renew collective efforts from international and national partners to drive progress on water sanitation and hygiene with the overall aim of achieving to eliminate open defecation target by 2030 and beyond.
3.	**International Year of Sanitation:** The International Year of Sanitation was declared in 2008. This aims to bring sanitation in the forefront to be seen as a driving force to development. Which of course, led to many sanitation initiatives alike globally to address sanitation challenges.
4.	**Thematic Priority Area on Water Supply and Basic Sanitation:** This Thematic Area on Water supply and Sanitation was created to support efforts already made in achieving water and sanitation services. Equally, it intends to strengthen and facilitate the collaboration between the UN bodies and its Member States in order to support sanitation and water initiatives in a bid to promote and raise awareness of the people with regard to water sanitation and hygiene.

Table 1.1 Other international initiatives to improve Sanitation and address Open Defecation (United Nations 2014).

1.2.6 Water Sanitation and Hygiene (WASH) performance monitoring

The World Health Organization and UNICEF as the joint global oversight bodies for WASH formed a Joint Monitoring Program (JMP) to define global classifications, standards and performance measurement methods to compare WASH progress across countries and regions. JMP progress estimation begins with identifying nationally representative data sources that contain information on the use of WASH services in various contexts, including homes, schools and health care settings. In many cases, this information is collected through interviews conducted by a country national statistics bureau. The JMP uses a simple linear regression to estimate the population using different levels of services based on the program 'service ladders' (see table 1.9 below).

This service ladders serve as a benchmark and compare progress across countries, they are designed to track progress towards a basic level of services, which is the indicator used for global monitoring (WHO, 2020).

Table 1.9 below explains the WASH programming performance process to serve as a bench mark for countries progress based on their national indicators. Each country determined your strength and weakness regarding the service area.

	WATER	SANITATION	HYGIENE	WASTE MANAGEMENT	ENVIRONMENTAL CLEANING
Higher levels of service	To be defined at a national level	To be defined at a national level	To be defined at a national level	To be defined at a national level	To be defined at a national level
Basic service	Water is available from an improved source on the premises.	Improved sanitation facilities are usable, with at least one toilet dedicated for staff, at least one sex-separated toilet with menstrual hygiene facilities, and at least one toilet accessible for people with limited mobility.	Functional hand hygiene facilities (with water and soap and/or alcohol-based hand rub) are available at points of care, and within five metres of toilets.	Waste is safely segregated into at least three bins, and sharps and infectious waste are treated and disposed of safely.	Basic protocols for cleaning are available, and staff with cleaning responsibilities have all received training.
Limited service	An improved water source is within 500 metres of the premises, but not all requirements for basic service are met.	At least one improved sanitation facility is available, but not all requirements for basic service are met.	Functional hand hygiene facilities are available either at points of care or toilets but not both.	There is limited separation and/or treatment and disposal of sharps and infectious waste, but not all requirements for basic service are met.	There are cleaning protocols and/or at least some staff have received training on cleaning.
No service	Water is taken from unprotected dug wells or springs, or surface water sources; or an improved source that is more than 500 metres from the premises; or there is no water source.	Toilet facilities are unimproved (e.g. pit latrines without a slab or platform, hanging latrines, bucket latrines) or there are no toilets.	No functional hand hygiene facilities are available at either points of care or toilets.	There are no separate bins for sharps or infectious waste, and sharps and/or infectious waste are not treated/disposed of safely.	No cleaning protocols are available and no staff have received training on cleaning.

Table 1.2 WASH monitoring performance process for service provision (WHO, 2020).

Figure 1.10 below shows a standardized description of Core WASH indicators that are used globally by countries. It used to measure the performance of WASH programs to assist development partners, program managers with performance monitoring, benchmarking, policy progress, evaluation, resource mobilization and decision making among others.

Table 2 List of core WASH indicators

WASH Component		Indicator	Rationale	Source of Information	Technique
Water Supply	Access to improved water sources [a,b]	% households with access to improved water supply	Core water-related indicator. An improved source serves as a proxy indicator for whether a household's drinking-water is safe.	Household	Direct questioning
		% of households adequately covered (based on the standard source:man ratio)	To geographically show the least covered administrative subunits, i.e. with less number of water points compared to the population living there.	Waterpoint	Visit to all waterpoints
	One way distance to water source (km) [a,b]	% of households spending, on average, more than 30 minutes in fetching water	To assess whether the source is sufficiently close to the household to ensure an adequate daily volume of water for basic domestic purposes. It also help determine the saving in time of fetching water, as a major expected benefit from the user's side.	Household	Direct questioning
	Individual collecting water [a]	% households in which women shoulder the burden in collecting water	This information helps identify gender and generational disparities with respect to water-hauling responsibilities. It also ascertains who would profit from bringing water closer to households.	Household	Direct questioning
	Domestic water consumption	Average rate of per capita domestic water consumption (based on of the number of containers consumed per day and the rough volume of these containers)	Distance to the water source may be an indirect indicator of water use, but it is not accurate enough to draw conclusions. From the health viewpoint, it is important to determine whether the volume of water collected for basic needs reaches the minimum target value.	Household	Direct questioning / Observation
	Operational status of water source [b]	% functional water points	To highlight sustainability issues, i.e. to identify operation and Maintenance (O&M) problems and to assess the overall quality of the O&M system.	Waterpoint	Observation
	Water quality (bacteriological contamination) [b]	% bacteriological acceptable water sources	To evaluate water safety, specifically to determine presence of faecal coliforms and few other critical parameters (pH, conductivity, turbidity and nitrates)	Waterpoint	Water quality testing (portable kit)
	Seasonality of water resources [b]	% year-round water sources	To identify seasonal or intermittent supplies, and to help assess reliability of the service. A water point is considered to be seasonal if a seasonal interruption in the supply of more than one month is reported. Where seasonality is high, people often need to search for alternative sources during dry season	Waterpoint	Direct questioning
	Management system [b]	% facilities with a functional and registered water committee	A key sustainability aspect of the supply. For successful and sustainable water schemes management, a proper institutional setting is required, and at least functional water user committees need to be established.	Waterpoint	Direct questioning
	Maintenance system	% facilities with local access to technical skills and spare parts	A key sustainability aspect of the supply. Access to skills and spares promotes locally-based maintenance.	Waterpoint	Direct questioning

Table 1.3 WASH core indicators for monitoring progress (Gine et al, 2013)

1.2.7 Processes for verification and certification of Open Defecation Free Community

Verification is the process of assessing ODF and hygiene behaviors change in a community for the purposes of certification. Certification is the official recognition resulting from the full achievement of ODF and other related conditions.

The process of verification, leading to certification, provides an additional motivation for communities to achieve total sanitation and be recognized for this achievement. In the early years of CLTS, different agencies within a country tended to use different definitions and indicators for verification with consequences for the perception of its credibility. There has been a marked shift in recent years towards standardization by a government led body, with the production of procedures for verification.

Verification usually starts with an internal assessment by local leaders leading to community ‘self-declaration’ to the local authorities or a facilitating NGO. This may be followed by one or more stages of verification (see figure 1.12).
Based on the criteria for ODF of a particular country, the process of verification may assess a variety of different indicators to determine whether a community (and later ward, district or region) has achieved the standard required for certification. Variation in definitions of ODF within and between countries can lead to a wide range of different indicators (see figure 1.9).

Certification is the final stage in the verification process. In some countries a single successful verification visit will result in certification. In other countries ODF status has to be sustained for a period after verification for a number of months, years depending on the country’s proxy indicators.

However, achieving a goal such as ODF is no guarantee of sustainable success. For example, poor maintenance of latrines and a lack of handwashing can become problems over time. Therefore, a whole range of different proxy indicators of ODF status are often added, relating to the standard of toilet required, its location (away from water sources), the availability of hand washing facilities, other safe water practices, and even solid waste management and maintenance of communal spaces. (Pasteur, 2017).

Box 1: A selection of proxy indicators for measuring elimination of Open Defecation

- No evidence of open defecation
- Every household has a latrine
- 100% *access* to latrine, but may be through sharing
- Evidence of regular use, cleanliness or maintenance of latrine
- Use by all members of the household
- Standard of latrine (cleanable, water seal, fly proof cover, VIP, privacy, safety, etc)
- Toilets in schools and other public places / institutions
- Existence of sanctions and ongoing monitoring plan
- Existence of handwashing (with soap or ash)
- Institutions / schools have latrines
- Distance of latrine from water source
- Disposal of baby faeces
- Safe management of water
- Solid waste management
- Clean compounds or communal spaces

Figure 1.9 Selection of proxy indicators for measuring the elimination of open defecation (Pasteur, 2017).

Figure 1.10 below describes the process for verification and certification of Open Defecation Free status in The Gambia, which a community has to meet before being certified open defecation free.

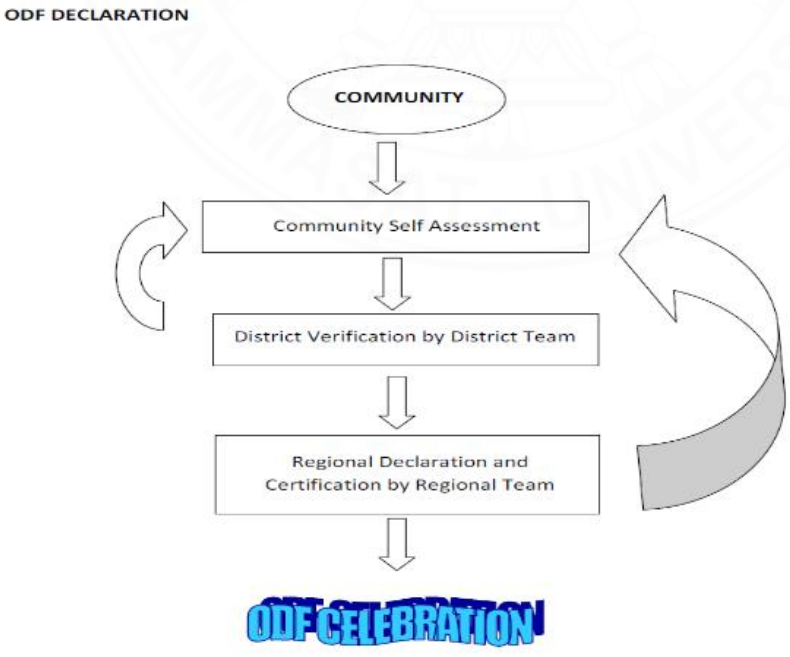

Figure 1.10 Process for verification and certification of Open Defecation Free status in The Gambia (Government of The Gambia, 2012).

1.2.8 The Sustainable Development Goals

On the 25th of September, 2015, United Nation General Assembly adopted UN-Global Action Resolution called the Sustainable Development Goals 2030 Agenda or commonly known as Agenda 2030. The Sustainable Development Agenda was developed as a global development framework to succeed the Millennium Development Goals, which ended in 2015 (UN, 2015).

The Sustainable Development Goals (SDG) are 17 interconnected sectoral pillars that support each other as shown in figure 1.7 below (UN, 2015). The SDG are designed to be a shared blueprint for peace and prosperity through a balance between social and economic advancement and environmental sustainability. (UN, 2017). Significant progress is being made on many SDG targets, but, overall, action to meet the Goals is not advancing at the speed or scale required to achieve all the 2030 targets. (UNDP, 2022).

SDG 6 is the target relevant to the WASH sector. However, it is far more ambitious than the prior MDG targets. It calls for access to adequate and equitable sanitation and hygiene for all and to end open defecation, paying special attention to the needs of women and girls and those in vulnerable situations (UNICEF 2018). SDG 6.2 calls for a collaborative efforts and actions from all levels of international, national and community level to achieve the set target by 2030.

With the support from UN Water under the United Nation, will unify the international communities to support SGG6 through five accelerators namely;

- ✓ Optimized financing, fully plans leading to services where they are needed most.
- ✓ Improved data and information to inform decision making and increase accountability.

- ✓ Improve institutions capacity and people to expand services
- ✓ Scale up new technologies and innovation practices
- ✓ Improve SDG6 through governance structures and national boundaries and make it everyone's business

Figure 1.11 shows the interconnection of SDG6 to the 16 Sustainable Development Goals a supporting pillar to each other. Meaning, all the SDGs are interdependent variables without which, achieving the SDG by 2030 would be a challenge.

Figure 1.11 The relationship of SDG 6 to other SDG (Van-Leeuwen, 2019)

1.2.9 Social determinants of health and the elimination of open defecation

In addressing the elimination of open defecation, it's important to identify and discuss some of the social determinants of open defecation. These include political, economic, social, cultural, and environmental factors.

1.2.9.1 Political factors:

Political issues are an impediment to the success of attaining OD. Therefore, has to be a political would at all of government decision making, particular at the highest level is absolutely fundamental. The moment there is political will, partners within and outside the country would support interventions both technically and financially (Osumanu et al., 2019).

1.2.9.2 Knowledge factors:

In the attainment of open defecation free status, capacity building of the target beneficiaries is crucial. This is where the people would understand the positive and negatives impact of open defecation in the community through behavior change communication intervention and would also facilitate interaction with private sector providers (Issaka Kanton & Osumanu et al, 2019).

1.2.9.3 Sociocultural factors:

Every community and country have a set of sociocultural norms and beliefs associated with particular objects or issues. Therefore, knowing the sociocultural aspect of the community for an intervention, would greatly help to increase the acceptability and utilization of the latrine as an option to eliminate open defecation plus other behavior change communication (Odafivwotu Ohwo, 2019).

1.2.9.4 Economic factors:

From studies, households with low income hardly spent money to build latrine, they rather spent on other family needs. This inhibits household owners from the provision of household toilets for the family. It also causes people's inability to afford fees charged by public toilet operators. This implies that, if a household cannot afford the fee for the use of a public latrine and cannot afford to construct a toilet facility, they would practice open defecation (Odafivwotu Ohwo, 2019).

1.2.9.5 Environmental factors:

This is another determinant that can affects the achievements to the practice of open defecation. In most of the communities where open defecation is widely practices, the topography nature of the land doesn't allow them to dig a pit latrine, this is because either water table is high, sandy or the place is rocky, which makes it very challenging. Therefore, there should be a sanitation innovation technology to support those households to build a latrine (Osumanu et al., 2019).

1.3 Problem statement

Sub-Sahara African countries continue to experience increased number of people defecating in the open, from 204 million people to 220 million between 2000 and 2015. The reasons for increasing open defecation in Sub-Saharan Africa are high population growth, which causes slippage in open defecation-free (ODF) certified communities, and sub-optimal latrine utilization.

Eliminating open defecation is not only about technical inputs such as building latrines and providing sufficient water supply. It requires simultaneous action on encouraging behavior change, building community empowerment and reducing social and economic disparities to ensure the long-term sustainability of those technical inputs. The Republic of the Gambia was the first country in West Africa to achieve the elimination of open defecation. However, Sierra Leone is still far from reaching this goal.

There are few studies documenting the experience of African countries in eliminating OD from a Global Health perspective i.e., in terms of documenting the lessons learned in building community empowerment and reducing social and economic disparities in achieving successful elimination. This study is an opportunity to address this gap by comparing the experience of two countries in West Africa, The Gambia and Sierra Leone.

CHAPTER 2
PURPOSE AND DESIGN

2.1 Study purpose

To document lessons learned from The Gambia and Sierra Leone in eliminating open defecation

2.2 Research question

What can be learned from the experience of The Gambia and Sierra Leone in the elimination of open defecation?

2.3 Research Objectives

1) To document and analyze similarities and differences in policy, strategy and implementation approaches in achieving the elimination of open defecation in The Gambia and Sierra Leone.
2) To document and analyze similarities and differences in approaches to addressing the social determinants of open defecation in The Gambia and Sierra Leone.
3) To document and analyze similarities and differences in approaches to promoting community empowerment in sustaining the elimination of open defecation in The Gambia and Sierra Leone.

2.4. Conceptual Framework of the study

The practice of open defecation is a traditional deep-rooted phenomenon that has been in existence for centuries in the world, particularly in the developing countries. This practice has caused many health effects which calls for a robust interventions and strategies by all stakeholders.

In addition, the conceptual framework is here to diagnosed the literature reviews in a bid to understand the determinants of open defecation and how can it be eliminated

eventually to improve and promote socioeconomic, cultural, political and fundamental wellbeing of the people across all levels whether poor or rich.

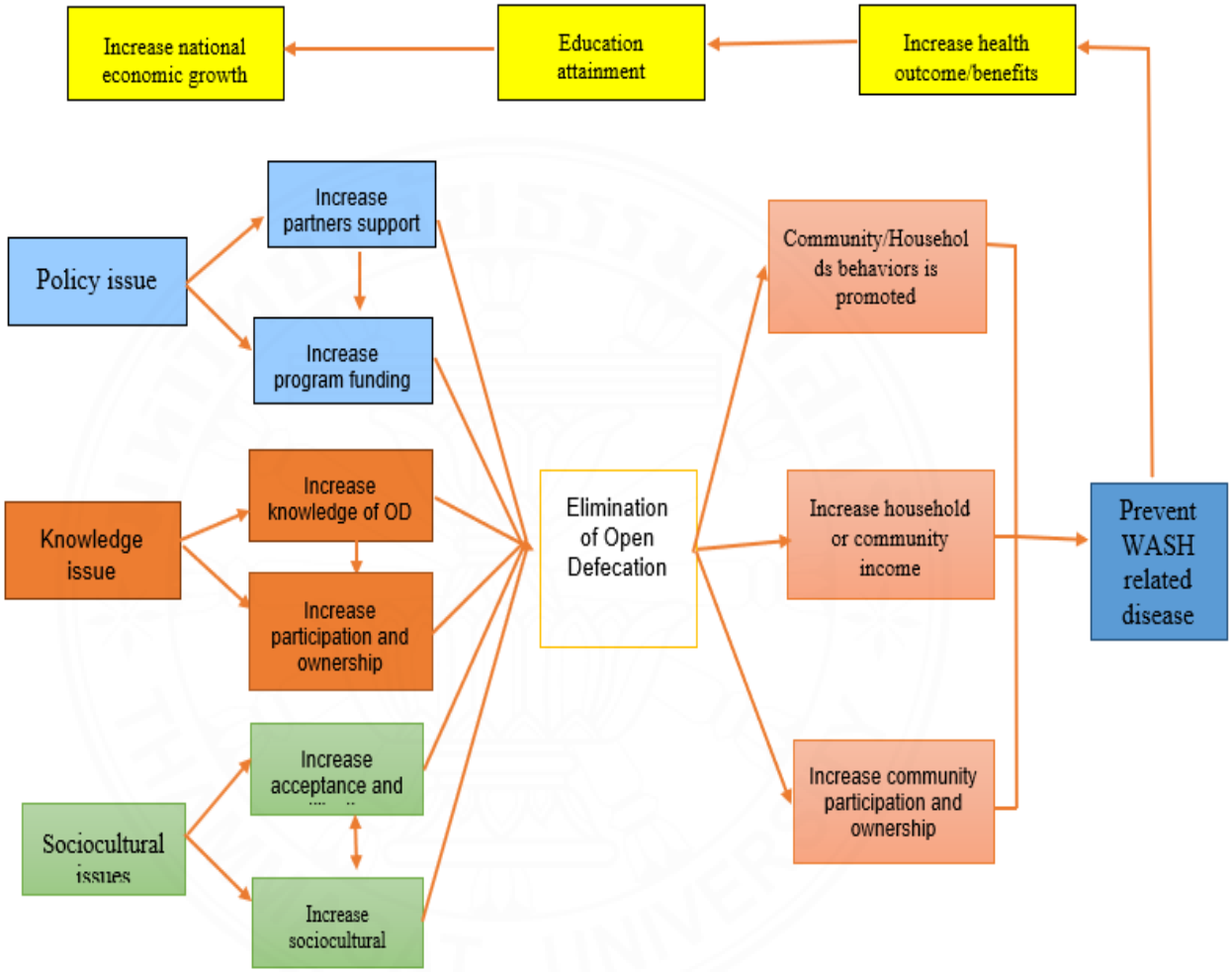

Figure 2.1. A Conceptual Framework of the study

CHAPTER 3
RESEARCH METHODOLOGY

This chapter will explain the strategies to be use in the study to address research question in order to achieve the study objectives.

3.1 Study design

This study is a structured documentary review.

3.2 Study area – Country selection process

This research is designed as a comparative study between The Gambia as the first country in West Africa to achieve OD elimination status and Sierra Leone.

In order to minimize confounding factors in the analysis, the following criteria were used to select The Gambia and Sierra Leone for this study:

1. Similar climate, geography, and geology: as The Gambia is in West Africa, and Sierra Leone was chosen from one of the 16 countries in the West African region.
2. Government documents and reports are produced in English: 5 countries fit these criteria, namely Gambia, Nigeria, Ghana, Liberia and Sierra Leone fit these criteria.
3. Similar cultures and religion: Gambia and Sierra Leone are the only countries in West Africa region where more than 70% of the country's population are Muslims.

Therefore, the study has compared the achievements and failures of The Gambia and Sierra Leone in achieving the elimination of open defecation.

Table 3.1 illustrate the selection criteria that were used to choose the country for the research, which was The Gambia and Sierra Leone. The study needs only two countries from West Africa to learn lessons in addressing open defecation.

No.	1. West Arica Countries- (Similar, geography and climate)	2. English language	3. Annual OD reports	4. Culture and Religion
1.	Burkina Faso			
2.	Benin			
3.	Cape Verde			
4.	Cameroon			
5.	Gambia	Yes	Yes	95% Muslim
6.	Ghana	Yes	Yes	
7.	Guinea Conakry			
8.	Guinea Bissau			
9.	Liberia	Yes	Yes	
10.	Mali			
11.	Mauritania			
12.	Niger			
13	Nigeria	Yes	Yes	
14.	Senegal			
15.	Sierra Leone	Yes	Yes	78% Muslim
16.	Togo			

Table 3.1 Country selection criteria for the study

3.3 Sampling strategy

3.3.1 Sources

Reports from governments and partners on the elimination of open defecation in The Gambia and Sierra Leone will be reviewed. Google Scholar and PubMed will be used to retrieve documents such as review journal articles and reports from Multiple Indicator Cluster Surveys (MICS), Demography Health Surveys (DHS) and agencies such as, UNICEF, UN, World Bank, WHO and SWA.

3.3.2 Search strategy

The Boolean search technique will be used to retrieve documents online, using the key words and operators “OR”, and “AND”. The following keywords will be used

interchangeable by using three two countries, namely “The Gambia’’ and “Sierra Leone’’.

For Research Objective 1, the search terms will be “eliminating open defecation, “eliminating, Sub-Saharan, Sanitation, Africa, Sanitation policy, basic drinking water, adequate sanitation facility, Sanitation policy, Economic development, Total sanitation’’. For Research Objective 2, the search terms will be ‘’Social’’ ‘’political’’ ‘’economical’’ and ‘’cultural’’. For Research Objective 3, the search terms will be ‘’community engagement’’ community participation and involvement’’, ownership’’ and ‘’sustainability’’

3.3.3 Exclusion and Inclusion criteria

Inclusion	Exclusion
Exclusively for Gambia AND Sierra Leone	Any literature documents that do not provide relevant data and information on Gambia and Sierra Leone
Government Information system relevant to the elimination of open defecation	Information that are not connected to the topic from Government and non-Governmental organization
Documents published in English language between 2015-2022 as 2015 was the first year of the global End Open Defecation initiative	Documents that are in local languages would not be reviewed.
Documents such as journal articles, organizations report, working papers on elimination of open defecation.	Journals articles, organization report and any other paper that don’t discuss WASH issues.
Peer review Publication on social determinants of open defecation from Global health perspectives.	Literature published in another language, except English, and duplicate literature

3. 4 Data management

As part of the study data management, EndNote was used for managing data, citations, and standard APA format for referencing. The Preferred Reporting Items for Systematic Review (PRISMA) flow chart was used to demonstrate how the data were selected and managed according to the proposed criteria.

3.5 Data analysis

As shown in figure 3.1 below, the study data were extracted from the literature review using the research analytical framework which were then analyzed using tabulation Matrix format. This was followed by a descriptive analysis where information and data from the selected literature articles, documents and reports leading to findings and conclusions.

Analytical Framework of the study

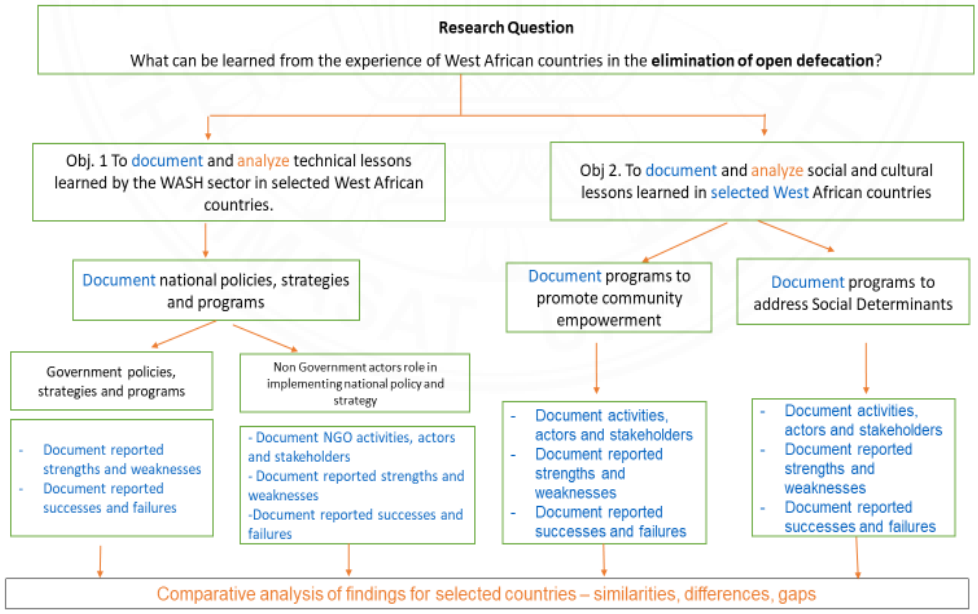

Figure 3.1 The analytical flow of the research process data collection during the literature review of the study**.**

CHAPTER 4
RESULTS AND FINDINGS

4.1 Findings

This chapter presents the study findings from the documentary review of the study objectives, by providing comparative analysis and lessons learned from The Gambia and Sierra Leone in addressing the elimination of open defecation.

4.1.1 PRISMA chart

During the literature review, a total of 95 was obtain from the online searches. After removing duplicates articles excluded left with 75. Followed by article included for full text evaluation after removing article not meeting inclusion criteria left 60. 40 articles were left for full text review of the study, after removing articles not meeting inclusion criteria based on full text review. Figure 4.1 below gave a detail presentation of the number of exclusion and inclusion criteria. In addition, table 4.1 also summarizes study documents by country and type.

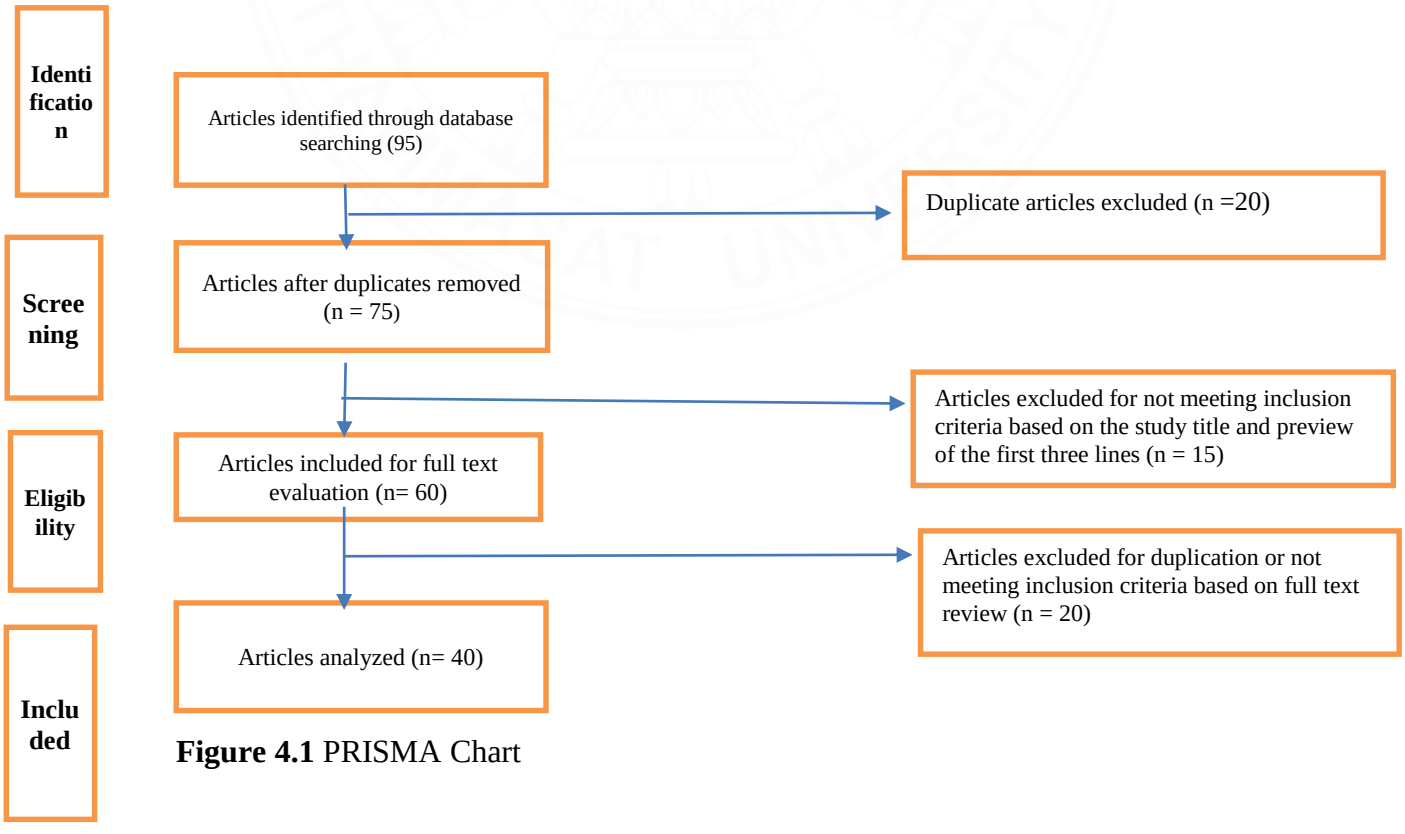

Figure 4.1 PRISMA Chart

Document Type	Name of Country		
	The Gambia	**Sierra Leone**	**Total**
Journal Publication	3	4	7
Grey literature	17	16	33
Total	20	20	40

Table 4.1 Documents included in the study analysis by publication type and by country.

4.1.2 Findings for Research Objective 1

The first Objective of this study was to document and analyze successes and failures in achieving the elimination of open defecation in The Gambia and Sierra Leone.

4.1.2.1 Comparative analysis of National Policies

Table 4,2 below highlights the comparative analysis of the study findings on the similarities and differences of the national WASH sector policy for The Gambia and Sierra Leone as a policy instrument to guide in addressing the improvement and promotion of sanitation particularly in the elimination of open defecation. The detail information of the table can be found at Appendix B of the document.

Comparative analysis of findings for the selected countries regarding their similarities and differences in Policy	
Similarities	Differences
Both countries have the following policy areas: 1. Capacity-building and Infrastructure Development 2. Delivery of Sanitation and Hygiene Services 3. Public-Private Sector Partnerships 4. Inter-sectoral Coordination and Collaboration 5. Community Consultation and Involvement	The Gambia has 2 policy priority areas that Sierra Leone does not have. They are: ✓ Sanitation Marketing and Hygiene Promotion ✓ Research and Development of Sanitation Technologies Sierra Leone does not have any policy areas that The Gambia does not have

Table 4.2 Comparative analysis of study findings on national sanitation and hygiene policy similarities and differences of The Gambia and Sierra Leone.

4.1.2.2 Comparative analysis of National Strategies

Table 4.3 below shows a summary for the comparative analysis of the findings on similarities and differences on study counties sanitation and hygiene strategy. In this, countries would learn from each other the strategy gaps and strength to enhanced the elimination of open defecation. Detailed information on countries' successes and challenges are found in Appendix B.

Comparative analysis of findings for the selected countries regarding their similarities and differences in Strategy	
Similarities	**Differences**
Both countries have the following strategies priority areas Enabling Environment: Policy and Legislation 1. Financing Framework 2. Capacity Building and Infrastructure Development 3. Quality delivery of Sanitation and Hygiene Services. 4. Sanitation and Hygiene Sector Coordination Framework 5. Monitoring and Evaluation Research and Development	The Gambia has 1 national strategy difference from Sierra Leone: ✓ Sanitation Marketing Sierra Leone has 2 national strategy differences from The Gambia: ✓ Logistic and Transportation Information Technology and Communication

Table 4.3 Comparative analysis of study findings on national sanitation and hygiene strategy similarities and differences for The Gambia and Sierra Leone

4.1.2.3 Comparative analysis of National Implementation Approaches

Table 4.4 below explains the comparative analysis of study findings on the implementation approaches by The Gambia and Sierra Leone. This has highlighted the program similarities and differences regarding its implementation approaches to address the practice of open defecation through total sanitation approaches in order to empower communities and households. A detail information on the implementation approaches and successes done by government and non-government actors to tackle open defecation in the studies countries can be found in Appendix B.

Comparative analysis of findings for the selected countries regarding their similarities and differences in Implementation approach	
Similarities	**Differences**
Both countries have the following implementation priority areas: 1. Community-Led Total Sanitation/ Community Action to Total Sanitation **2.** School-Led Total Sanitation (SLTS)	No data was found on differences in implementation approaches for The Gambia and Sierra Leone.

Table 4.4 Comparative analysis of study findings on implementation approach similarities and differences of The Gambia and Sierra Leone

4.1.3 Findings for Research Objective 2

The second Objective of this study was to document lessons learned in terms of social determinants in addressing the elimination of open defecation in The Gambia and Sierra Leone**.**

The table below highlights the comparative analysis of the social determinants similarities and differences that have being used by The Gambia and Sierra Leone to address the practice of open defecation and lessons to learn.

Comparative analysis of findings for the selected countries regarding their similarities and differences in social determinants of health	
Similarities	**Differences**
Both countries have the following implementation priority areas: 1. Social and Behavioral Change Communication to Open Defecation	The Gambia has 1 program differences 1. Results-Based Financing of Sanitation and Hygiene **2.** No data were found for Sierra Leone regarding differences in their

	approaches to addressing the social determinants of open defecation

Table 4.5 Comparative analysis of study findings on social determinants similarities and differences to address open defecation in The Gambia and Sierra Leone.

4.1.4 Findings for Research Objective 3

The third Objective of this study was to document lessons learned in terms of Community Empowerment in addressing the elimination of open defecation in The Gambia and Sierra Leone**.**

In addressing the elimination of open defecation, the empowerment of communities is very important in order to have a sense of participation and ownership by the community. Therefore, the table below is a summary of community empowerment similarities and differences that were implemented by The Gambia and Sierra Leone to address the issue of poor sanitation including open defecation.

Comparative analysis of findings for the selected countries regarding their similarities and differences in Community empowerment	
Similarities	**Differences**
No data was found for Sierra Leone on community empowerment initiatives	The Gambia has a program called **LAST MILE Campaign** with 4 programs for community empowerment to address open defecation while Sierra Leone no data was found. They are; 1. Never Again In My Generation 2. ‘’Nsa Kenno’’ Initiative 3. Adolescent Against Bush Action (AABA) 4. Innovation and adaptation of appropriate technology for riverine communities, elderly and differently-abled.

Table 4.6 Comparative analysis of study findings on Community empowerment approach similarities and differences for The Gambia and Sierra Leone

CHAPTER 5
DISCUSSION OF THE FINDINGS

5.1 Discussion on Findings for Research Objective 1

5.1.1 Similarities and differences in National Policy

To achieve the Sustainable Development Goal 6.2 target for universal access to sanitation and hygiene, including open defecation, studies highlight the importance of developing a national sanitation and hygiene policies to provide the necessary framework in which sanitation initiatives and targets are combined into a single program at national level. (Galan et al, 2013).

The study found that The Gambia and Sierra Leone both have strong national sanitation and hygiene policy frameworks that aim to provide an enabling environment for coordination and implementation and to ensure sustainability of approaches to improve and promote sanitation and hygiene including the elimination of open defecation for better socioeconomic growth and quality education for households and communities. (UN Country Annual Result Report, Sierra Leone, 2020 & Government of The Gambia, 2020).

In these policy frameworks, it was found that there are policy priority areas in which the Gambia and Sierra Leone have differences which might explain their successes and failures to achieve the elimination of open defecation, notably the role of Sanitation Marketing, Research, and Development.

According to UNICEF, to build sustainable markets for sanitation good and services by working with the private sectors is one of its key programming approaches that was adopted in their strategy, 2016-2030 (UNICEF, 2020). However, with this strategic vision and stated in the Gambia Health Strategic Plan and National Sanitation and hygiene Policy, the Gambia has strengthened its private sector engagement and

participation to carry out sanitation marketing in the country, for an affordable and appropriate low-cost sanitation technologies that can easily be replicated by communities.

Currently, the innovation by private sector is at micro-level by capacitating local artisans with prerequisites knowledge and skills to venture into business and to develop investor friendly policies and regulation to encourage more private sector participation. (Government of The Gambia 2014-2020).

This innovation in Gambia provides construction of toilet slabs and demonstration toilets in communities and promotes their sale on low cost thus generating a demand-driven approach to increasing access to toilets. This study could not find evidence of such sanitation marketing in Sierra Leone. (The Gambia National Health Strategic Plan 2014-2020 & National Health Strategy and National Sanitation Policy, 2020).

Despite water and sanitation improvement, there is still fragmentation of institutional roles and responsibilities which has hindered progress in the area of sanitation in the country. Success can only be registered with the required harmonization and a well-coordinated-wide approach to achieve sanitation and hygiene issues (WASH Bottlenecks Analysis, Gambia, 2016).

In addition, the study found that sanitation including open defecation was not a popular subject at any level in Sierra Leone private sectors unlike water, putting Sanitation Marketing non-popular in the country, particularly among low-income households. It has consequently been lacking the priority that it should enjoy in relation to the burden that it places on society. Challenges related to sanitation and hygiene in Sierra Leone are numerous ranging from service coverage, low level of financial investment and lack of legislative institutional framework make the country to be far from reaching SDG target to eliminate OD (Government of Sierra Leone, 2015-2020).

The study findings indicated that sewage and sanitation services in Serra Leone are confined within Freetown where it is limited, old, and inadequate to meet the increasing population demand posing people to practice open defecation. Equally, the institution responsible for the service has the inadequate human capacity and financial resources to carry out the responsibilities because of high demand.
(Government of Sierra Leone, 2015-2020).

According to Sierra Leone Annual Sector Performance Report, in order to achieve the national WASH targets, particularly addressing open defecation practices by 2030, the national sector leadership and commitment needs to be revitalized, reform, and consistently implement the reform agenda that started with the formulation of National Water and Sanitation Policy (Water, Sanitation and Hygiene Sector Annual Performance Report, 2017).

Finally, advocating for sanitation marketing to enhance toilet affordability and acceptability to the population, particularly the marginalized people, is a step in the right direction especially for countries in Africa to emulate in order to enhance intersectionality and transformative changes toward sanitation and hygiene behaviors. (Government of The Gambia, 2020).

5.1.2 Similarities and differences in National Strategy

The development of a national strategy is of critical importance to achieve and sustain the gains for the study countries. The national sanitation and hygiene strategy are expected to promote and contribute to the realization of countries' development agenda as stipulated in their respective National Development Plans and Health policy particularly in promoting the elimination of open defecation.

The study found that the national strategy on sanitation is expected to provide a strategic direction for effective and efficient program implementation, prevention of sanitation and hygiene-related disease as well as enhancing the social and economic

growth of individuals and the communities at large (Government of The Gambia, 2020).

Three differences in sanitation and hygiene strategy priorities exist between The Gambia and Sierra Leone that serves as a catalyst to address open defecation, namely Sanitation marketing, Logistic and Transportation, Information Technology and Communication. (Government of The Gambia, 2020 and Government of Sierra Leone, 2010).

According to the findings, The Gambia through the Ministry of Health has engaged private sectors to increase access to sanitation facilities by training 165 local artisans, despite a low scale (Government of The Gambia, 2020).

The study shows that the private sector and business partners in Sierra Leone have shown little interest and still are in the early for partnering with the government in the construction of toilet facilities. Marketing strategies that would provide a supportive environment for the demand and supply of environmental health, sanitation goods and services have been analyzed and determined to be a must-do for the Directorate of sanitation and hygiene under the Ministry of Health and Sanitation (Government of Sierra Leone, 2015-2020).

Despite numerous WASH challenges, Sierra Leone was able to make a decentralization system to enable the rural population in the country to have benefitted from programs implementation and community involvement with the support of newly established Directorate for Sanitation and Hygiene, which has increase access to WASH services water from 57% in 2015 to 63% in 2020, Sanitation from 14.9% in 2015 to 16.5% in 2020 (Sierra Leone National Environmental Health and Sanitation Strategy, 2015-2020 & WHO/UNICEF JMP, 2021).

From the study findings, The Gambia and Sierra Leone sanitation and hygiene programs are experiencing large compartmentalization of program strategy, without a unified strategic direction in addressing sanitation and hygiene issues in a collaborative

manner. However, this unfortunate situation has resulted inadequate coordination by the Ministry of Health as the government institution to lead sanitation and hygiene implementation and supervision, both at national, regional and district levels. Equally, this has resulted to the duplication of programs activities and competition for a meager resource (Government of The Gambia, 2020, Government of Sierra Leone, 2010).

Therefore, harmonizing national sanitation and hygiene implementation programs with a strategic direction is expected to close the coordination and implementation gaps as part of efforts to increase sanitation access and reduce open defecation practices among households and communities.

The study cannot establish an association between the availability of national strategy and open defecation reduction but can give an opportunity for sanitation approaches to be effectively planned, coordinated, and implemented to achieve health outcomes.

5.1.3 Similarities and differences in implementation approaches

Open defecation is a common traditional practice that is adored by many societies and is surrounded by deep-rooted sociocultural beliefs and values, which must be understood and put into consideration when designing an implementation plan, particularly with behavioral activity in order to be successful.

Effective and efficient implementation approaches of programs are a critical element that should be considered when addressing the issue of total sanitation behavior including open defecation. This approach has shown so many success stories by bringing stakeholders including communities in making a decision, particularly on their behavior. Changing the behavior of individuals and communities has long been recognized as one of the most effective methods for sanitation and hygiene promotion.

According to the study findings, the implementation approach to address open defecation, in The Gambia and Sierra Leone has similarities in using Community Led

Total Sanitation (CLTS) and School Led Total Sanitation (SLTS) respectively. (Gambia ODF Roadmap, 2019-2021, UNICEF, 2009).

According to UNICEF, Total sanitation approaches at the community level discourage the use of subsidy sanitation facilities thereby focusing on the use of locally available, affordable and acceptable materials to promote sanitation sustainability. These approaches appear to be very successful in many sub-Saharan African countries. (UNICEF Annual Report, 2021).

According to Morten Skovdal of the Department of Public Health, University of Copenhagen says, “Health promotion and communication at the community level is no longer about ‘experts’ providing target audiences with health-related information but rather involving and engaging local actors to challenge health-damaging practices, and norms, as well as to facilitate locally defined solutions to health problems.” Based on this concept, there have been many models that come under the umbrella of “total sanitation programs,” working with communities that have been successful in changing behavior. (Sumedh. M. K, 2018).

The government of The Gambia introduced CLTS in 2009 and reported it as an effective intervention, where more than 1, 721 out of 1981 communities have been declared ODF with the rapid construction of household latrines countrywide. (GODF Roadmap, 2019-2021). In The Gambia, the government has scaled up the CLTS strategy to urban areas by streamlining it into a national health strategy to advocate a campaign called ‘Monthly Set Setal’ in order to strengthen the promotion and improvement of sanitation and hygiene. In addition, identify and promote national public figures as sanitation/ODF champions across the country (UNICEF-Gambia, 2017).

With the declaration of a community to be ODF, community health workers and Public Health officers keep monitoring these communities to avoid ODF relapses. School Led Total Sanitation (SLTS) was also used as a strategy for greater diffusion across reference groups, targeting schools where ethnic communities overlap to achieve

maximum benefits of child-to-child peer pressure, and setting up school sanitation and hygiene clubs among others. All these serve as a milestone for The Gambia to address open defecation.

From the study findings, since the end of the civil war in Sierra Leone in 2002, the government introduces Community-Led Total Sanitation or Community Action to Total Sanitation and reported more than 34, 512 people living in OD Free communities, 5, 328 newly constructed latrines. In addition, the approaches were incorporated into district health plans and School Sanitation and hygiene program (UN Annual Result Report, Sierra Leone, 2020). Therefore, it can be concluded with other similar studies that, the reduction of OD rate could be as a result of the success of CLTS approaches in most of the communities of the study countries.

Community Led Total Sanitation approach particularly for the elimination of open defecation appears to be an innovative method of empowering communities with the necessary knowledge and skills, thereby stimulating a collective transformative change towards poor sanitation and hygiene behavior to promote sociocultural, quality education and economic growth for the population. (Galan et al, 2013).

From the Global health perspective, proper planning and implementation of different sanitation approaches such as CLTS and SLTS would yield success stories not only in the elimination of open defecation but fostering intersectoral collaboration among health, nutrition, and education.

5.2 Discussion on Findings for Research Objective 2.

5.2.1 Social Determinants of Health

The practice of open defecation is a deep-rooted cultural and traditional belief that must be understood and put into consideration when planning and implementing any sanitation and hygiene activities to be successful.

The study findings reveal that Result Based Financing was identified as a strategy in The Gambia under Maternal and Child Nutrition and Health including sanitation and hygiene to increase utilization and coverage of health indicators.
Through this project strategy, communities and households are supported through a Conditional Cash Transfer system to improve and promote their behaviors on Maternal and Child Health including Sanitation and hygiene. As a result of this strategy, the community group intervention led to an overall national hygiene coverage to 30.9% respectively (Results-Based Financing in The Gambia 2015 MICS, 2018 The Gambia).

The study findings also reveal that communities through the Village Development Committees were supported to raise awareness of households on open defecation, particularly those still practicing (GMCNHRP, 2020), unlike Sierra Leone, where no findings showed an intervention for community Resource Based financing as a form of cash transfer system to support household sanitation and hygiene services. Therefore, these are lessons for Sierra Leone to emulate particularly for low-income households.

Studies conducted in Nigeria, Tanzania, and South Africa have shown that the demographic characteristics of households such as income have been identified as a major determinant to encourage OD, especially in rural areas. (Odafivwotu Ohwo, 2019). A study in rural Tanzania also indicates that about 46% of households that have no plan to build a latrine have complained about financial constraints, household-level income determines the ownership of a toilet and the likelihood to stop OD. (Odafivwotu Ohwo, 2019).

According to studies in WA Municipality said, a household with low income, is are 75% greater chance of practicing OD, because low income inhibits the provision of latrines by the household, rather than thinking of the family needs and forcing them to defecate in the open. In addition, this also causes people's inability to pay fees at the public toilets provided by the state or private. (Issaka Kanton Osumanu et al, 2019).

Social and Behavior Change Communication strategy has been a Community based Sanitation and hygiene approach being used in The Gambia and Sierra Leone, by

engaging communities for the elimination of open defecation and increasing coverage of key household behaviors across the country. (The Gambia Maternal and Child Nutrition and Health Results Project Report, 2020).

During the study findings, it was revealed that the government of The Gambia with support from UNICEF and other stakeholders in the country has been engaging faith-based organizations(Muslims and Christianity) and cultural leaders on their roles and responsibilities to end open defecation in the Gambia as a measure to tackle cultural ‘’taboos’’ associated to OD. (UNICEF-WASH Thematic Report, 2019).

It is worth noting, as most Sierra Leonean do not appear to understand the need for a toilet since the culture of open defecation is deeply entrenched in the society posing challenges to increasing open defecation coverage by 2030. (Government of Sierra Leone Annual Report, 2017).

Studies conducted in WA Municipality Ghana, indicate that 68% of the people said, cultural beliefs and practices influence people to defecate in the open. (Odafivwotu Ohwo, 2019). Similar studies indicated that, the acceptability and technical feasibility of a sanitation facility depends on the household incomes and cultural adaptation to a new behavior (K. O. Connell, 2014).

Therefore, with continues Social and Behavioral Change Communication (SBCC) with traditional and faith leader on good sanitation and hygiene behaviors, serve as a human development and the appreciation of the need for environmental sanitation. Furthermore, a household with an educated (formal, informal) head stands 18.5% chance not to practice open defecation with household members than the counterparts. This observation was expected since educated household heads can understand the effects of open defecation and the relevance of having a toilet at home. (Issaka Kanton & Osumanu et al, 2019).

Up to date, only 53% of the population in Sierra Leone benefit from basic drinking water sources, this implies that, 47% are still drinking from an unsafe source (WHO/UNICEF, 2021). Studies from Ethiopia has support that, households with limited access to basic drinking water were more likely to practice OD, which shows

that access to water has an association with OD practice. Meaning, households that experience water shortage would face challenges to keep their hygiene neither for the toilet usage. (Belay el al, 2022).

It is evident that, investment on water sanitation and hygiene services including the elimination of open defecation don't only improved our livelihood but and economic yield return of about USD 28.4 billion a year to the African Continent or increase of 5% GDP and quality education and nutrition from Global health perspective (AMCOW, 2018-2030).

5.3 Discussion on Findings for Research Objective 3.

5.3.1 Community empowerment and open defecation

Community empowerment is an important component when addressing any development agenda, particularly the issue of open defecation. Changing the behavior of individuals and communities has long been recognized as one of the most effective methods for sanitation and hygiene promotion.

Studies have revealed that many successes had been registered using a community empowerment approach in promoting and improving sanitation and hygiene behavior of individuals and communities from social and cultural perspectives (Sumedh. M. K, 2018).

Following the Call to Action by the UN Deputy Secretary-General (Jan Eliasson) on 8th May 2014, study findings show that the government of The Gambia on the 23th March, 2020 made a national redeclaration as a follow-up to stop the practice of open defecation as part of global commitment to SDG6.2 target by 2030 and to become the first country in Sub-Saharan Africa to be Open defecation free. (UNICEF-Gambia, 2020).

Prior to 2015, and 2010, the open defecation practice in The Gambia was 2.5% nationally. (WHO/UNICEF, 2021). In answer to the global action, the government of

The Gambia has initiated the LAST MILE Campaign, in which a National Roadmap was developed to guide the operationalization for the elimination of open defecation in the Gambia as a community empowerment approach. In this Roadmap, there are different strategies being used such as creating enabling environment, capacity building of communities, coordination, promotion of improved technology options through market-based sanitation, provisions of improved toilets both at schools and public places and media campaigns with artists across the country. (Gambia ODF Roadmap, 2019-2021).

According to the study findings, The Gambia has used "Never Again in My Generation", Nsa Kenno Initiative, and Adolescent Against Bush Action (AABA) as part of the LAST MILE campaign in empowering communities to address the elimination of open defecation in the country. (UNICEF Thematic -WASH group report, 2019 & UNICEF Annual country report, 2021).

The findings indicate that, as a result of the LAST MILE Campaign initiative, 13, 850 people from 230 communities were empowered with information on good hygiene practices through ''NEVER AGAIN IN MY GENERATION'' (UNICEF-WASH Thematic report, 2019). In addition, a nationwide caravan tour was organized with The Gambian artist, local drama groups, community video shows, and radio and television programs, all to raise awareness of the people on the effects of open defecation on the population (UNICEF-WASH Thematic report, 2019).

According to Daniel Gashaneh Belay, households that are exposed to media are less likely to practice OD. This evidence is supported by a study conducted in India and Nigeria, which shows that using modern communication platforms such as mass media and social media has direct benefits for preventing the practice of open defecation (Belay et al, 2022).

Study finding shows that through the ''Nsa Kenno'' approach, 120 Village Development committees were trained on interpersonal communication skills as part of strengthening local and decentralized governance structures to empower women,

children, youth, and marginalized groups to develop their potential for socio-economic growth and development including sanitation (UNICEF Annual country report, 2021).

According to the findings, this has been very successful in the reduction of open defecation practices among households. Because, each household is empowered with the help of youths in the community to give a helping hand to households that cannot build a latrine either economically or physically (UNICEF Annual Report, 2021).

From the study findings, after going through the government and UN Agencies' report in Sierra Leone on empowering communities to address the issue of open defecation, it was found out that most of the activities are engaged on Ebola prevention and control rather than the elimination of open defecation.

Therefore, LAST MILE Campaign initiatives with different strategies have shown a tremendous reduction in the rate of open defecation in The Gambia from 2.5% in 2010 to 0.1% (WHO/UNICEF JMP, 2021) and access to improved sanitation facilities from 60.9% in 2013 to 71.9% in 2019 (DHS, 2019), while access to basic drinking water from 77.4% in 2010 to 80.9% in 2020 respectively (WHO/UNICEF JMP, 2021).

This is to show that Sierra Leone and other sub-African countries can learn from The Gambia in using the practical community empowerment approaches with political support to address the elimination of open defecation and WASH-related diseases. From the global health perspective, it can increase health outcomes, quality education and economic growth of the community and the country at large.

5.4 LIMITATIONS OF THE STUDY

This study has a number of limitations.

1. National level factors (policy and strategy) may have a significant time lag between when they were implemented and the study outcome measure. Thus, more time may be needed to observe the changes resulting from these national level factors.

2. Different numbers of national surveys to estimate OD prevalence for each country. Probably some countries have had several national surveys in the past years, while others had only two surveys conducted between 2015 and 2022. Applying a line equation to estimate OD prevalence from 2015 and 2022 for the countries under study with a small number of data points may not represent the actual change in OD prevalence in the country.

3. There were differences between rural and urban OD prevalence that were not addressed in this study. The study focused on total/national OD prevalence, but some countries may have decreased urban OD prevalence while increasing rural, or vice-versa.

4. This study used a limited number of national level variables that are thought to influence OD prevalence. It is possible that I missed relevant information, such as the amount of human resources dedicated to reducing OD prevalence, as well as cultural and behavioral practices related to OD.

5. The civil war that ravaged Sierra Leone from 1991 to 2002 destroyed the country's infrastructure including its health systems. The civil war brought all of the health and economic infrastructures down to zero during the 10 years. Many clinics that had been established by the government were completely demolished. Many people moved from the countryside into main cities and towns, which compounded the poor health and sanitation situation. It was extremely difficult to really get things moving at that time. The country is still recovering from the effects of the war today.

6. Finally, the study did not make any review to establish the relationship between religion and OD prevalence during the course of the research. Therefore, there is need for further studies to be carried out looking at all religious denomination.

CHAPTER 6
CONCLUSIONS AND RECOMMENDATIONS

The research question for this study was to find out what can be learned from the experience of The Gambia and Sierra Leone in trying to achieve the elimination of open defecation.

The Government of The Gambia in partnership with the sectors was able to support local artisans to venture into the construction of toilet slabs at a low cost for the poor and marginalized people. In addition, the launch of the LAST MILE Campaign as part of community empowerment in order to raise awareness of people on the effects of open defecation across the country was a success in reducing the rate of open defecation.

From the study findings, the issue of sanitation and hygiene especially the practice of open defecation has been a problem in Sierra Leone, in which both the government and private sectors have little or no interest in moving the sanitation ladder. Much of its work is concentrated on sewage rather than stopping the practice of open defecation with little or no community empowerment programs.

Finally, based on the current open defecation rate in Sierra Leone and with the goal of 2030 for the SDGs rapidly approaching, a clear understanding of the key driving factors are needed particularly the political commitment and community empowerment.

Recommendations

Based on the gaps identified in the study, the following recommendations for improving programs for the elimination of Open Defecation include:

- ✓ **Private Sector Engagement:** The need for private sector engagement and partnership is a crucial component in sanitation and hygiene promotion, particularly among the low-income earners, where a low cost effective and affordability toilet slabs will be provided at an affordable price to the community. In addition, the private sector also can participate in building public latrines for user fee, all in reducing the rate of open defecation in the country.

- ✓ **Community empowerment and engagement:** Studies have established that, involvement of the community in planning and implementation of sanitation and hygiene promotion have shown successes in many parts of the world especially in the developing countries. This is so, because the community would cherish and take full participation and ownership of the program or project to better their life.

- ✓ **Strengthening Social and Behavioral Change Communication (SBCC):** Open defecation as a deep-rooted cultural practice for decades in communities particularly in the rural areas. It is widely known that, there are so many traditional taboos attached to the practice of open defecation based on individual or societal ideology. Therefore, there is need for countries to strengthen and enhanced the SBBC intervention or program at all level of the implementation strata.

REFERENCES

African Ministers Council On Water(AMCOW) Strategy, (2018-2030). The African WASH Ministers' Guide to Finance https://www.ircwash.org/sites/default/files/amcow-african-wash_ministers-finance-guide.pdf

Awasthi, R., & Suryavanshi, P.(2017) A Study on the Influential Factors on the Level of Awareness of Menstrual Hygiene Practices in Adolescents. https://www.researchgate.net/profile/Priyanka-Suryavanshi-3/publication/351978602

Belay, D. G., Asratie, M. H., Aragaw, F. M., Tsega, N. T., Endalew, M., & Gashaw, M. (2022). Open defecation practice and its determinants among households in sub-Saharan Africa: pooled prevalence and multilevel analysis of 33 sub-Saharan Africa countries demographic and health survey. Tropical Medicine and Health, 50(1). https://doi.org/10.1186/s41182-022-00416-5

Bhatt N, Budhathoki SS, Lucero-Prisno DEIII, Shrestha G, Bhattachan M, Thapa J, et al. (2019) What motivates open defecation? A qualitative study from a rural setting in Nepal. PLoS ONE 14(7): e0219246. https://doi.org/10.1371/journal.pone.0219246

Economics of Sanitation Initiative, Water and Sanitation Program (WSP), World Bank (2016) https://www.lixil.com/en/sustainability/pdf/the_true_cost_of_poor_sanitation_e.pdf

Ferguson, L., Boudreaux, C., Cheyassin Phall, M., Jallow, B., Fofana, M. N., Njie, L., Ceesay, A. A., Gibba, C. K., Njie, M., & Bittaye, M. (2022). Facility and Community Results-Based Financing to Improve Maternal and Child Nutrition and Health in The Gambia. Health Systems & Reform, 8(1), 2117320

Galan, D. I., Kim, S.-S., & Graham, J. P. (2013). Exploring changes in open defecation prevalence in sub-Saharan Africa based on national level indices. BMC Public Health, 13(1), 527. https://doi.org/10.1186/1471-2458-13-527

Government of The Gambia (December, 15, 2020), Maternal and Child Nutrition and Health Results Project. https://documents1.worldbank.org/curated/en/635181609126209829/pdf/Gambia-Maternal-and-Child-Nutrition-and-Health-Results-Project.pdf

Government of The Gambia (GOTG) (2020). Third National Communication under the UNFCCC. Ministry of Climate Change environment and Natural Resources (MECCNAR), Banjul. 75p

Government of The Gambia (2014-2020), National Health Strategic Plan, file:///C:/Users/Dembo%20Fatty/Desktop/Documents/Gambia_national_health_strategic_plan_2014_-_2020.pdf

Government of The Gambia (2019-2021), National Open Defecation Free Road Map

Government of The Gambia (2020), National Sanitation and Hygiene Policy

Government of The Gambia (2014-2020), National Sanitation and Hygiene Strategy

Government of the Republic of Sierra Leone Ministry of Energy And Water Resources (2010), National Water And Sanitation Policy .

Government of the Republic of Sierra Leone Ministry of Water Resources and Ministry of Health and Sanitation (2017), Water, Sanitation and Hygiene

Sector Performance Report. https://wash-alliance.org/wp-content/uploads/sites/43/2019/01/ASPR-2017-final-draft-5aug2018-1.pdf
Government of the Republic of Sierra Leone Ministry of Health and Sanitation (2015-2020) National Environmental Health and Sanitation Strategy. https://mohs2017.files.wordpress.com/2017/06/national-environmental-health-and-sanitation-strategy-2015-2020-draft.pdf
Hickling, S., & Bevan, J. (2010). Scaling up CLTS in sub-Saharan Africa. Tales of shit: Community-Led Total Sanitation in Africa, 61.
Jain, A., Wagner, A., Snell-Rood, C., & Ray, I. (2020). Understanding open defecation in the age of Swachh Bharat Abhiyan: Agency, accountability, and anger in rural Bihar. International journal of environmental research and public health, 17(4), 1384
Ohwo, O. (2019). Dimensions of inequality in urban and rural water, sanitation and hygiene services in Sub-Saharan Africa. European Scientific Journal ESJ, 15(8).
Osumanu, I. K., Kosoe, E. A., & Ategeeng, F. (2019). Determinants of open defecation in the Wa municipality of Ghana: empirical findings highlighting sociocultural and economic dynamics among households. Journal of environmental and public health, 2019.
Pasteur, K. (2017). Keeping track: CLTS monitoring, certification and verification. https://opendocs.ids.ac.uk/opendocs/bitstream/handle/20.500.12413/12728/Katherine_Pasteur_Keeping_Track.pdf?sequence=1&isAllowed=y
Rural Water Supply and Sanitation Project (RWSSIIP) Report (2019), The Gambia https://www.afdb.org/fileadmin/uploads/afdb/Documents/Project-and-Operations/Gambia_-_Rural_Water_Supply_and_Sanitation_Project_-_PCR.pdf
Rural Water Supply and Sanitation Project (RWSSIP) Report (2017). The Gambia https://www.afdb.org/fileadmin/uploads/afdb/Documents/Project-and-Operations/The_Gambia-_Approved
Sumedh, M. (2018), Community-based approaches to tackle open defecation in rural India: theory, evidence and policies. Occasional Paper(178). https://www.orfonline.org/wp-content/uploads/2018/12/ORF_OccasionalPaper_178_OpenDefecation_FinalForUpload.pdf
UNICEF (2020-2025), flagship program,https://www.unicef.org/ethiopia/media/6046/file/End%20Open%20Defecation.pdf
UNICEF (2018). UNICEF's game plan to end open defecation. BMC Public Health. https://www.unicef.org/media/91316/file/Game-plan-to-end-open-defecation
UNICEF (2019), Country Office Annual Report (2019) The Gambia. https://www.unicef.org/media/90891/file/Gambia-2019-COAR.pdf
UNICEF (2nd March, 2020), Country Office, The Gambia https://www.unicef.org/gambia/stories/gambia-makes-landmark-commitment-end-open-defecation-2020
UNICEF (2018), Country Office Annual Report, The Gambia. https://www.unicef.org/media/90781/file/Gambia-2019-COAR.pdf

UNICEF (27th February, 2022) Country Office, Sierra Leone, https://www.unicef.org/sierraleone/stories/changing-future-goderich-communities-through-wash-support
UNICEF, (2020), Guidance on Market-Based Sanitation. New York: https://www.unicef.org/media/88821/file/MBS-Guidance-2020.pdf
UNDP (2022). https://www.undp.org/sustainable-development-goals
United Nations (2017), Resolution adopted by the General Assembly on 6 July 2017. Work of the Statistical Commission pertaining to the 2030 Agenda for Sustainable Development (A/RES/71/313 Archived 28 November 2020 at the Wayback Machine)
United Nations (2015), Resolution adopted by the General Assembly on 25 September 2015, transforming our world: the 2030 Agenda for Sustainable Development (A/RES/70/1 Archived 28 November 2020 at the Way back Machine)
United Nations (2016): Water and Sanitation Interlinkages across the 2030 Agenda for Sustainable Development Goals, Geneva Water-and-Sanitation-Interlinkages.pdf, https://www.unwater.org/app/uploads/2016/08
United Nations (2020), Country Annual Result Report, Sierra Leone, 2020.https://sierraleone.un.org/sites/default/files/2021
World Bank Data (2021), https://data.worldbank.org/country/TD
World Health Organization (2020), Global progress report on water, sanitation and hygiene in health care facilities: Fundamentals first (9240017542).
World Health Organization (2022), Sanitation [Internet]. Fact Sheet. https://www.who.int/news-room/fact-sheets/detail/sanitation
World Health Organisation (2020), https://www.worldlifeexpectancy.com/sierra-leone-diarrhoeal-diseases

APPENDIX A

Prevalence of open defecation from WHO/UNICEF JMP Monitoring survey 2015 to 2020 for The Gambia and Sierra Leone.

No.	Name of the Country	Survey year	Prevalence of open defecation practice (%)
1.	Gambia	2015	1.2
2.	Gambia	2016	1.0
3.	Gambia	2017	0.8
4.	Gambia	2018	0.5
5.	Gambia	2019	0.3
6.	Gambia	2020	0.1
1.	Sierra Leone	2015	18.7
2.	Sierra Leone	2016	18.3
3.	Sierra Leone	2017	17.8
4.	Sierra Leone	2018	17.3
5.	Sierra Leone	2019	16.9
6.	Sierra Leone	2020	16.4

Source: WHO/UNICEF JMP, 2021

APPENDIX B

Data Collection and Analysis

Government policies, strategies and program to eliminate open defecation (Research Objective 1)

	Name of the Country	Name of the policy & Date	Strengths	Weaknesses	Successes	Failures
1	**The Gambia**	National Sanitation and Hygiene Policy, January 2020 AND National Strategy for Sanitation and Hygiene, 2020 – 2022. January 2020	A) Strengthening of the enabling environment and national systems to deliver sustainable sanitation services with an equity focus (policy development, coordination, and monitoring)	✓ Inadequate disbursement of funds for sanitation and hygiene from Government.	✓ In 2015, the presidential declaration of the country to attain open defecation free by 2017. ✓ In 2020, The Vice President Dr Isatou Touray on Friday 24th January 2020 led the signing of a redeclaration to end open defecation in The Gambia on behalf of the President (UNICEF 02 March, 2020). ✓ Allocation of budgets for the implementation of Open Defecation (National Health Sector Strategic Plan, 2014-2020). ✓ The Gambia Government and UN partners launched the Decade (10 years) of Action to accelerated achieve the Sustainable Development Goals (SDGs) (02 March, 2020). ✓ The Gambia vision to prioritize the development of an ODF Roadmap that provides a mean and guide towards achieving an open defecation free in the Gambia using different strategies (Gambia ODF Roadmap, 2019-2021).	

	Name of the Country	Name of the policy & Date	Strengths	Weaknesses	Successes	Failures
					✓ In order to accelerate progress towards the 2030 SDG targets, water, sanitation and hygiene were key outcome indicators in the 2018-2021 national development plan of The Gambia (NDP 2018-2021).	
					✓ Establishment of WASH program Unit at the Ministry of Health to coordinate and implement sanitation and hygiene including OD activities. (National Sanitation Policy and hygiene Policy, 2020)	
					✓ Establishment of ODF coordination activities at all levels. (National Sanitation Policy and hygiene Policy, 2020)	
			B) Strengthening sanitation marketing for to enhance to enhance affordability by the marginalized people.		✓ Development of national training manual on Artisan to promote sanitation marketing.	
					✓ Total of 83 masons and 82 carpenters 165. (GRWSSIP, 2017)	
					✓ Training of local artisans on appropriate sanitation and hygiene technology. (GRWSSIP, 2017)	
					✓ Facilitate the implementation of Sanitation marketing in ODF communities.(GRWSSIP, 2017)	
			C) Creating demand through institutionalizing community approaches		✓ The introduction of Community Led Total Sanitation as a community approach to end the practice of open defecation	

	Name of the Country	Name of the policy & Date	Strengths	Weaknesses	Successes	Failures
			to total sanitation, addressing behavioural barriers, and creating a sustained social norm of not practicing open defecation at scale.		✓ Since introducing CLTS, Open Defecation rates in The Gambia have declined from 4.4% in 2005 to 1% in 2018 (MICS, 2018).	
2	**Sierra Leone**	The National Water and Sanitation Policy, July 2010. AND National Environmental Health and Sanitation Strategy, 2015 – 2020	A) Strengthening of the enabling environment and national systems to deliver sustainable sanitation services with an equity focus (policy development, coordination, and monitoring)	✓ Government funding for WASH is integrated into various MDAs and not easily identified e.g. separate funding for rural sanitation, rural water, school WASH etc. (Annual Sector Performance Report, 2017).	✓ The introduction of Agenda for Change by His Excellency Dr. Ernest Bai Koroma in 2008 and the Agenda for Prosperity in 2013 bear perhaps the strongest testimony of Government commitment in this regard. (Sierra Leone national environmental health and sanitation strategy 2015-2020) ✓ Establishment of Division of Environmental Health and Sanitation of the Ministry of Health and Sanitation was elevated to a Directorate. (Sierra Leone national environmental health and sanitation strategy 2015-2020) ✓ The National Environmental Health and Sanitation Strategy has been developed and finalized under the leadership of the Ministry of Health and Sanitation, with technical assistance from UNICEF. (Sierra Leone national environmental health and sanitation strategy 2015-2020) ✓ Annual average available water per capita will be reduced by 49.7% to 16,000 cubic Meters per person per year.	✓ Over 50% of child mortality is associated with the prevailing poor water and sanitation services (National WASH policy, 2010)

	Name of the Country	Name of the policy & Date	Strengths	Weaknesses	Successes	Failures
					✓ Development of standards and guidelines for WASH in schools (Annual Sector Performance Report, 2017).	
			B) Strengthening sanitation marketing to enhance affordability by the marginalized people.			✓ Unavailability of sanitation marking to enhance affordability by the marginalized people.
			C) Creating demand through institutionalizing community approaches to total sanitation, addressing behavioral barriers, and creating a sustained social norm of not practicing open defecation at scale.		✓ Slight progress has also been made in improving the linkage between donor organizations and NGOs which mostly operate at community levels. (National Water and Sanitation policy, 2010).	✓ 5% of peripheral healthcare units and 26% of primary schools do not have WaSH facilities. (UN, 2020 Annual Result Report, Sierra Leone).
						✓ Only one in five schools have access to basic water and sanitation services.
					✓ In 2020, the percentage of households using an improved sanitation facility improved to 55 percent, compared to 49 per cent in 2013	✓ More than 80% of under-five deaths at hospitals have environmental health and sanitation-related causes. (UN, 2020 Annual Result Report, Sierra Leone).

Table (2) Non-Government actors who engage in the elimination of open defecation in The Gambia and Sierra Leone (Research Objective 1)							
No	**Program Name & period**	**Name of Country**	**Name of the NGOs**	**Partners organization (if any)**	**Purpose of the program**	**Strength**	**Successes**
	WASH Program 2015 -2022	The Gambia	UNICEF	Government, CSOs,	A commitment to supporting The Gambia Government in achieving NDP goals and SDG 6,	✓ Focusing on the most vulnerable and disadvantaged groups. ✓ A valued government partners ✓ Encouraging innovation ✓ Humanitarian leader (lead agency for coordination under the Inter-Agency Standing Committee (IASC) system both globally and, in most cases, at the country level ✓ Working for children across sectors ✓ Convening and working at all levels both globally and local	✓ Support the Ministries of Health and Environment, Climate Change and Natural Resources conducted a National Consultative Meeting to End Open Defecation in The Gambia. (UNICEF Annual Report, 2020). ✓ Supported the development of a GIS database registering locations of Open Defecation Free (ODF) practices, which will guide strategy, advocacy and evidence-based targeting to accelerate the national goal of 100% ODF (UNICEF Annual Country Report, 2021). ✓ Reached over 20,000 people (55% women) with information on good hygiene practices and ending OD through caravans and social media. ✓ Artists were mobilized to produce short videos in the form of drama to reinforce the ODF agenda, generating almost 20,000 views on social media. ✓ Supported the improvement of WASH services in schools, health facilities and communities, including the provision of supplies

						✓ Monitoring – global and national (Lead JMP monitoring with WHO) on WASH.	(UNICEF Annual Country Report, 2021). ✓ Seven rural schools accessed improved sanitation through the construction of gender-sensitive ventilated improved pit latrines (UNICEF Annual Country Report, 2021). ✓ Supported the MoH, Ministry of Water Resources and Ministry of Environment to sign an inter-ministerial, costed ODF roadmap that defines actions and accountabilities of different stakeholders ✓ UNICEF also engaged with the climate-smart WASH project supported by African Development Bank (AfDB) and will begin GIS mapping in 2020 to serve as a basis for project implementation (UNICEF-Gambia Annual Country Report, 2019). ✓ Weekly Markets in rural areas were visited through LAST Mile using the Never Again Open Defecation in my Generation strategy. (UNICEF-WASH Thematic Report, 2019).
			The Gambia Red Cross Society				✓ In collaboration with UNICEF, 1180 volunteers in 7 regions were trained on elimination of open

							defecation. (UNCEF Country report, 2020).
			Gambia Rural Water Supply and Sanitation Improvement Project (GRWSSIP)			✓ International Assistance for Development ✓ Strong government partnership	✓ 50 Sanitation facilities in schools, rural health centres, markets were constructed (GRWSSIP Report, 2019). ✓ Through CLTS, a total of 982 latrines are constructed (GRWSSIP Report, 2019). ✓ 165 artisans (83 masons and 82 carpenters) trained. (GRWSSIP Report, 2019).
	UN Sierra Leone Contribution to SDG6.2 2020	Sierra Leone	United Nation	Government	UN SDG support to countries	✓ Global development lead ✓ Strong government partnership	✓ The National Strategy/Roadmap for Sanitation and Hygiene and the National Strategy on Water Safety Planning were finalized and launched with UN support. ✓ 34,512 people now living in 68 open defecation free communities, including 29,071 beneficiaries ✓ Newly constructed 5,328 improved latrines (UN Country report, Sierra Leone, 2020) 131, 648 persons were reached with Hygiene promotion messages and campaigns. (UN Annual Result Report, Sierra Leone, 2020). ✓ Distributed 4,500 handwashing buckets and 75,000 bars of soap to

							4000 households (UN Annual Result Report, Sierra Leone, 2020)
			UNICEF		UNICEF County Annual Management Plan (AMP) 2020-2023	□□ Focusing on the most vulnerable and disadvantaged groups. ✓ A valued government partners ✓ Encouraging innovation/initiatives on WASH ✓ Humanitarian leader (lead agency for coordination under the Inter-Agency Standing Committee (IASC) system both globally and, in most cases, at the country level ✓ Working for children across sectors ✓ Convening and working at all levels both globally and local. ✓ Monitoring global and national (Lead JMP monitoring with WHO) on WASH	✓ Support to developed national strategies on water safety plans (WSPs) to address water quality. ✓ A National strategy on Sanitation with a costed Action Plan for ending open defecation by 2025(UNICEF Sierra Leone Country Report, 2020). ✓ Community Led Total Sanitation was implemented in 122 communities. (UNICEF Sierra Leone Country Report, 2020). ✓ Support the MoH to revive the district-level task group on sanitation (UNICEF Sierra Leone Country Report, 2020). ✓ Strengthened ODF verification and certification capacity (UNICEF Sierra Leone Country Report, 2020). ✓ Support to revive the WASH Sector Pillar meetings at national level (UNICEF Annual Country Report, 2019). ✓ Supported Community Led Total Sanitation (CLTS) in 536 communities resulting in 199,899 additional people (52 per cent

							women) living in open defecation free (ODF) environments. ✓ WASH programming in schools reached 94,530 children (48,211 girls) in 354 schools (UNICEF Annual Country Report, 2019). ✓ 4,500 handwashing buckets and 75,000 bars of soap to 4,000 households and 25 schools in Sierra Leone
			African Development Bank Project		Aims at contributing 15%(water) and 7% increase improved sanitation		✓ Overall, the project provided at least 1,400,000(51% women) residents with WASH services. ✓ This is equivalent to 23% of the national population gaining round the clock access to safely managed water supply and improved sanitation services. (Freetown Wash and Aquatic Environment Revamping Project, 2018)

Table (3) Implementation strategies/activities including Community Empowerment to address the elimination of open defecation (Research Objective 2)						
No.	**Name of the organization/program**	**Programing approached used**	**Target area/beneficiary**	**Success**	**Weaknesses**	**Failures**
1	UNICEF- Gambia	Community Based Sanitation Promotion (CLTS Approach, Social and Behavioral Change Communication)	Country wide	✓ A total of 9,800 people in 67 communities were empowered through the provision of information on good hygiene practices and ending OD (UNICEF-Gambia Annual Country Report, 2019). ✓ A total of 936 community structures, health care workers and key stakeholders learned to implement WASH in schools, health care facilities and communities. (UNICEF-Gambia Annual Country Report, 2019). ✓ 150 community members benefited from capacity enhancement on their roles and responsibilities to attain ODF. (UNICEF Gambia Country Report, 2019).		

				✓ Under the innovative ‘’Nsa Kenno’’ approach supported planning and positive behavior change interventions in communities through the UNICEF-UNDP partnership to strengthen local and decentralized governance structures including ending open defecation. (UNICEF Annual Country Report, 2021). ✓ Training of 120 VDCs on interpersonal communication skills to enable them to undertake effective community engagement to empower women, children, youth and marginalized groups to develop. (UNICEF Annual Country Report, 2021). ✓ More than 40 community action plans which will feed into the ward and regional development plans. (UNICEF Annual Country Report, 2021).		

				✓ 13,850 people (7,064 female and 6,786 male) from 20 communities were empowered with information on good hygiene practices and open defecation through **(youth led community** house to house, school visits, community drama, social and community theatre, radio and TV spot messages) (UNICEF-WASH Thematic Report, 2019).		
	AfDB-Project, Gambia			✓ 1025 people have been trained/sensitized, out of which 47% were female.		
	Sierra Leone- UNICEF	Urban Sanitation improvement	Community of Gbonkowaylay	✓ Foreign and Commonwealth Office became the Foreign, Commonwealth & Development Office (FCDO) and UNICEF, a local Civil Society Organization has also worked with the households to use practical, locally available and cheap materials to help improve sanitation and hygiene practices		

				✓ Women constituted a minimum 30 per cent membership in project management committees and implementation structures. (UNICEF Sierra Leone Country Report, 2020). ✓ 10,000 people from six communities getting better access to water and sanitation facilities ✓ Trained Community Hygiene Volunteers to engage in house to house sensitization on behaviors changes (UNICEF Sierra Leone, 2022)		
	UN -Sierra Leone			✓ 200 (24 women) youth supported through capacity building and supply of motorized waste collection tricycle, contributing to Freetown's solid waste initiatives (UN Country Annual Result Report, Sierra Leone 2020)		

Table (4) Implementation strategies/activities including Social Determinants to address the elimination of open defecation (Research Objective 3)

No.	Name of the organization/program	Activities conducted	Programming Approaches used	Target area/beneficiary	Strength/Success	Weaknesses
1	National Nutrition Agency - Gambia AND Ministry of Health-Gambia	Strengthen the utilization of community nutrition and adaption of behaviors/practices	Result Based Financing (cRBF) Approach	Country wide	345 communities were supported with Cash through Community Result Based Financing (cRBF) (The Gambia Maternal and Child Nutrition and Health Results Project Report, 2020).	
					Social Behavioural Change Communication (SBCC) to communities and households. (The Gambia Maternal and Child Nutrition and Health Results Project Report, 2020).	
					Support the promotion of community hygiene activities and proper sanitation (The Gambia Maternal and Child Nutrition and Health Results Project Report, 2020).	
					Increased handwashing stations from 4000 to 10, 000 (The Gambia Maternal and Child Nutrition and Health Results Project Report, 2020).	

					Establish RBF scheme for beneficiaries to have more independence and prioritize their health without undue economic consequences. (The Gambia Maternal and Child Nutrition and Health Results Project Report, 2020).	
					Supported communities through payments to the VDCs and VSGs for community development activities and awareness building including open defecation elimination (The Gambia Maternal and Child Nutrition and Health Results Project Report, 2020).	
	RWSSIP - Gambia	Hygiene Promotion and Education	CLTS Approach		2000 people trained on CLTS and SBCC	
					982 household latrines were constructed for low economic household (GRWSSIP-Report, 2019).	
	UNICEF - Gambia		'NEVER AGAIN OPEN DEFECATION IN MY GENERATION"		Last Mile campaign and the Never Again in My Generation strategy used in 2017, ODF status improved with only 1%(UNICEF-WASH Thematic Report, 2019)	

					Engagement of key influencers in communities such as faith leaders, natural leaders and cultural leaders to create awareness among communities on OD.(UNICEF-WASH Thematic Report, 2019)	
					Provision of innovations and adoption of appropriate technology options for the riverine communities and people with special needs i.e. the elderly and differently abled. (UNICEF-WASH Thematic Report, 2019).	
	Plan International-Sierra Leone	Capacity building of communities on CLTS	Community Led Total Sanitation (CLTS)		Communities are now constructing and rehabilitating their latrines without external Support.	
					Selected natural leaders/ volunteers from this communities are taking the lead in triggering and monitoring exercise	
					Mobilizing and organizing communities to attain ODF Status.	
					Sanitation committees formed within ODF communities to sensitize households on sociocultural beliefs attached to practicing OD	
					Strong political will to implement CLTS activities.	