PRESBYTERIAN UNIVERSITY COLLEGE, GHANA

FACULTY OF DEVELOPMENT STUDIES

DEPARTMENT OF ENVIRONMENTAL AND NATURAL RESOURCES MANAGEMENT

ASSESSMENT OF OPEN DEFECATION IN KWAHU AFRAM PLAINS SOUTH DISTRICT, GHANA

BY

AMPONSAH DANIEL KWARTENG

SEPTEMBER 2019

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Dissertation submitted to the Department of Environmental and Natural Resources Management of the Faculty of Development Studies, Presbyterian University College, Ghana, in partial fulfillment of the requirements for the award of the Master of Science degree in Environmental Health and Sanitation

BY

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SEPTEMBER 2019

DECLARATION

Candidate's Declaration

I hereby declare that this thesis is the result of my own original research and that no part of it has been presented for another degree in this University or elsewhere.

Candidate's Signature: …… Date: …….

Name: Amponsah Daniel Kwarteng

Supervisor's Declaration

I hereby declare that the preparation and presentation of the thesis were supervised in accordance with the guidelines on supervision of dissertation laid down by the Presbyterian University College, Ghana.

Supervisor's Signature: …….. Date: ……

Name: ……

ABSTRACT

This study examined the barriers to open defecation free in Kwahu Afram Plains South District, Ghana. The study employed both qualitative and quantitative methodology in data collection. A questionnaire administration to one hundred and sixty-nine (169) households randomly selected from 6 communities in the Tease Area Council and 5 communities in the Samanhyia Area Council. The findings from the survey describes that, the cost of constructing toilet facility is key determinant for open defecation in the Kwahu Afram Plains South District. 72% of the respondent who did not have toilet facility at home mentioned that, the introduction of subsidy to facilitate the toilet construction would help address open defecation in the District. The findings from the survey also describes that, 79% of the respondent had knowledge on the advantages of sanitary toilet facility however 99% of the respondent indicated that, there are no local regulations to discourage open defecation in the communities. Moreover, the finding of the survey established that, the District Assembly is trying possible to end open defection however weal legislation implementation and inadequate funds to support vulnerable families to own a toilet facility has worsen the situation of communities to be declared open defecation free. World Vision Ghana is supporting the District assembly to facilitate the attainment of open defecation free in Communities.

ACKNOWLEDGEMENTS

I wish to express my gratitude to my supervisor Mr. Angmor Emmanuel; this thesis would not have been possible without his expert advice and unfailing patience. I am also grateful for his faith in this study especially in the sometimes-difficult circumstances in which it was written.

My acknowledgement would not be complete without the mention of my lovely Mother Madam Cecilia Antwi, my wonderful siblings Dora Amponsah and Evelyn Amponsah for their financial support as well as their words of encouragement.

I also wish to express profound gratitude to the Chiefs and people of Kwahu Afram Plains District who availed themselves to be interviewed. May God bless them.

DEDICATION

I dedicate this book to my lovely mother Madam Cecilia Antwi who introduced me to benefits of schooling from an early age enabling me to reach this far for such a study to take place despite the hardships they went through in taking very good care of me. May God richly bless her

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CHAPTER ONE

INTRODUCTION

1.1 Background

Access to improved latrines at home and in public places is a crucial defence against faecal-oral transmission of pathogenic agents to humans and the environment (Mara et al. 2010; Kvarnstrom et al. 2011). The case of low-income peri-urban and urban slums is of much greater concern due to their frequent association with vector-borne diseases, bacterial infections and contamination of drinking water amidst a rapidly growing population (Nakagawa et al. 2006; Paterson et al. 2007; Sidhu and Toze 2009).

Nevertheless, the impact of latrine provision on public health is dependent on the response of the intended users, especially their commitment to regularly use and maintain the facility. To ensure regular latrine usage, the choice of technology, the design and construction of facilities, as well as their operation and maintenance should be directly linked to the defecation practices, preferences and cultural values of the intended users (Garfi and Ferrer-Marti 2011; Olschewski 2013). It is, therefore, crucial to understand the factors that influence latrine usage and the barriers to regular use in any cultural and socio-economic context. Understanding of such factors is required to guide the development of technical and social interventions that are consistent with and likely to stimulate local drivers of latrine usage.

The sixty per cent of the "global total", who do not have access to toilets live in India, and hence are forced to defecate in the open. In actual numbers, sixty per cent translates to 626 million. This makes India the number one country in the world where open defecation is practised. Indonesia with 63 million is a far second. At 949 million in 2010

worldwide, vast majority of people practicing open defecation, live in rural areas. Though the number of rural people practicing open defecation has reduced by 234 million in 2010 than in 1990, "those that continue to do so tend to be concentrated in a few countries, including India," notes the 2012 update report of UNICEF and the World Health Organization. For instance, of the 2.4-lakh gram panchayats in the country, only a mere 24,000 are completely free of open defecation. More than half of the 2.5 billion people without improved sanitation live in India or China. The high figure prevails even as four out of 10 people who have gained access to improved sanitation since 1990 live in these two countries. Awareness of the link between open defection and diseases like diarrhea will in one-way change the way people defecate. After all, almost 10 per cent of all communicable diseases are linked to unsafe water and poor sanitation (Prasad, 2012).

The Joint Monitoring Programme (JMP) of the World Health Organization (WHO) and UNICEF defines improved sanitation as "a sanitation system in which excreta are disposed of in such a way that they reduce the risk of faecal-oral transmission to its users and the environment" (UN Millennium Project, 2005; p. 29). Specific types of improved sanitation facilities recognized by the JMP include flush or pour-flush latrine, pit latrine with a slab, ventilated improved pit (VIP) latrine and the composting toilet (Karnib 2014). To be accepted as 'improved', a sanitation facility is required to be used exclusively by only one household.

In Ghana, only 14 % of the population have access to improved sanitation as against an MDG target of 54 % set for 2015 (JMP 2014). The proportion of Ghana's population depending on shared sanitation, including public toilets (59 %), is the highest in the world (JMP 2014).According to the JMP, 19 % of Ghanaians practice open defecation while 8

% depend on various forms of unimproved sanitation options such as bucket latrines. In terms of technology mix, nearly half of Ghanaian households depend on dry sanitation systems such as the simple pit and ventilated improved pit latrines while 10 % depend on wet or flush on-site systems (GSS 2008). Sewerage is only piloted in parts of the country and covers only about 3 % of Ghanaian households (GSS 2013). To improve the status of sanitation in the country, the government has over the last decade introduced a number of policies including the adoption of the community-led total sanitation (CLTS) approach and a strong advocacy for households in residential areas to acquire their own toilet facilities, with public sanitation facilities only recommended for transport terminals and other commercial centers (MLGRD 2010a).

In spite of the recent efforts to improve sanitation in Ghana, the above statistics show that progress towards the MDG has been slow, with some policies simply not yielding the anticipated results. For instance, the use of hygiene education and subsidies to increase household latrine uptake under the Rural Water Supply Programme IV (2005—2009), implemented in selected districts in the Ashanti Region, failed to generate the expected response from the beneficiaries (Ampadu-Boakye et al. 2011). In each of the participating districts, 226 latrines were allocated to be constructed with 50 % subsidy. However, in some districts, less than 5 % of the allocated latrines were actually constructed under the programme. Among the reasons attributed to the poor response to the intervention in these districts was the failure to conduct background studies in the communities prior to the start of the project. Such background studies usually include household preferences and willingness-to-pay, which are useful for predicting community response to such programmes (Whyte 1986; Ayele 2005).

Beside these, understanding the reasons why people avoid or are dissatisfied with existing facilities would also offer a useful insight into how to design the technical and social aspects of the interventions in order to make them attractive to the targeted beneficiaries.With the limited sanitation facilities in Ghana, studies and official reports have identified some technical and non-technical factors that affect their regular usage, level of service and user satisfaction. These include design and construction, mechanisms to dislodge excreta, siting of facilities and user behaviour (Jenkins and Scott 2007; MLGRD 2010b; Appiah and Oduro-Kwarteng 2011). However, the reaction of people to these technical and operational factors may vary among the different cultures and socio-economic characteristics across the country (Dittmer 2009; Olschewski 2013).

This study was conducted in the coastal peri-urban setting of Ghana to understand the factors influencing latrine usage and the barriers or constraints that discourage regular use of existing household and communal latrines.

1.2 Problem Statement

According to the latest estimates of the WHO/UNICEF Joint Monitoring Programme for Water Supply and Sanitation (JMP), released in early 2013 (collected in 2011), 36 per cent of the world's population lacked improved sanitation facilities and 1.1 billion people have no access to any type of improved drinking source of water.

Ghana has been ranked second after Sudan in Africa for open defecation, with almost 5 million Ghanaians not having access to any toilet facility (WHO/UCIDEF. 2014). The number of people practicing open defecation in Ghana was reported at 19% in 2015. (World Bank, 2015).

Report from transect walk in Communities in Kwahu Afram Plains South indicated that about 20% of the population has toilet facilities in their homes. The entire Afram Plains South District have only 3 public toilet facility (KVIP) against a population of 16, 284 (Field report, 2019). All the three (3) public toilets are located in the Tease Area Council and none in the Samanhyia Area Council and that most of them prefer to defecate in bushes and other places for physical, social and traditional reasons.

Moreover, all the 23 Schools in the Tease and Samanhyia Area Councils have toilet facility at the School premises however in some of the communities, the community members use the toilet facility and hence most at times at the critical time when the child needs to access the toilet facility, it will not be available for use. Most often, children become victims of snake bite and scorpion sting while defecating in the bush

There is therefore the need to assess reasons that contribute to open defecation in this peri-urban community. This study therefore seeks to document factors that hinders Communities to attain Open Defecation Free (ODF) in Kwahu Afram Plains South District.

1.3 Objectives of the Study

The main aim of the study is to determine the barriers to Open Defecation Free (ODF) in the Afram Plains South District of Ghana

1.4 Specific Objectives

The specific objectives of the study seeks to;

i. Determine the social, economic, physical barriers to open defecation in the Afram Plains South District

ii. Assess the knowledge base of people on effects Open Defecation Free(ODF)

iii. Assess institutional support to Communities to the end of open defecation

1.5 Research Questions

i. What are the social, economic, physical barriers to open defecation in the Afram Plains South District

ii. What is the knowledge base of people on effects Open Defecation Free(ODF)

iii. What are the institutional support to Communities to the end of open defecation

1.6 Organization of Study

This study is organized into five chapters, with the summary organized below:

Chapter one focuses on the introductory aspect of the research topic. It introduces the research. This chapter consists of introduction, background of the study, statement of the problem(s), objective(s) of the study, significance of the study, limitations and organization of the study.

Chapter two refers to Literature Review, which reviews the related literature on the topic.

Chapter three deals with the research methods used and includes sample frame and size as well as the sources of data collected that is primary source and secondary source, the sampling and the method used for the research. This chapter also gives a profile of the study area (Kwahu Afram Plains South District).

Chapter four is concerned with the discussion of data, analysis of data and the interpretation of data collected. To achieve the objectives of the research, the researcher collected data and information using various sampling techniques as highlighted in chapter three (3).

Chapter five deals with findings, recommendations and conclusion of the study.

CHAPTER TWO

LITERATURE REVIEW

This section provides a review of literature that relates to sanitation. Human excreta (faeces and urine) shall be dwelt as focal to the study

2.1 Barriers to Open Defecation Free (ODF)

2.1.1 Social barriers

Zombo (2010), reported on some beliefs and taboos obtained from a community leader in Bakeh curve, Koya chiefdom, Port Loko district of Sierra Leone during a Community-Led Total Sanitation programme. According to the community leader ―Shit gathered in the same place kills and brings bad luck to the village. Also, in the north and southern part of Sierra Leone, the communities believe that one should not sit over someone else‘s shit because it will lead to bad luck.

A study conducted by Water Aid (2008) on consumer‘s attitude and practices in regard to use of sanitation facilities which employed a qualitative approach and using nine focus-group discussions in Kampala revealed cultural norms, for instance the traditional people fear the use of modern toilet‖, was one of the factors that contributed to poor sanitation in the community. The study also revealed that, some communities in Sierra Leone, the people of Kampala also believe that pregnant women should not use the toilet because of fear of the death of the foetus.

Sholikhah (2012) stated in his research that people who practice open defecation is the behavior of people who do not have their own toilet. Low socio-economic conditions led to prioritize the needs of society rather than making food consumption and provide toilet at home. (Solikhah, 2012).

Research in the province of East Nusa Tenggara by Faku (2008), suggest that among people who suffer from diarrhea, some of which have a habit of open defecation. The use rate of family toilet relatively low at 54% and is likely to diarrheal disease 38% more likely than those who use toilet (Faku, 2008).

In Ghana a study conducted by Water and Sanitation Sector Monitoring Platform (WSMP, 2008), on factors that contribute to the high incidence of unsafe human excreta disposal include absence of clean household or public latrines and ignorance of the harmful effects of unsafe human excreta disposal such as, open defecation. In addition, some people simply prefer the bush, the beach, or any open field for the simple reason that those places are more airy and convenient. There are others who do not want to add their faeces to those of others in one pit for several superstitious and cultural reasons.

Non enforcement of environmental laws is also a major factor. A study conducted on open defecation in rural communities and the cultural values that reinforce its practice in four West African countries — Burkina Faso, Ghana, Mali, and Nigeria revealed that the practice of open defecation was surrounded by cultural taboos and beliefs particular to many of the ethno-linguistic groups who live there (Water Aid, 2008).

A study by Arku (2010) shows that about 92% of the respondents believed that clean water is more important than toilet facilities. Yanore (1995) revealed that in Bolgatanga, people have less priority for safe disposal of human excreta compared to safe drinking water. The impact of social norms on safe disposal has also been identified by Devine (2010). The author discovered that people imitate others (defecating indiscriminately) thinking that it is good practice. The old, weak and or sick people who do not get support from relatives or others end up disposing their excreta badly. Moreover, Mafuya (2010)

also realized from the study some social challenges to safe disposal of human excreta. The study revealed that most of the people in the rural community believe that the toilet facility is of Western origin and therefore prefer using the bush.

2.2 Physical Barriers

In Kampala, Water Aid (2008) identified some physical barriers inhibiting safe disposal of human excreta. These barriers include lack of toilet facilities, lack of space, and condition of the toilet facilities: durability and neatness, topography of the community, proximity of the toilet facility to their homes, availability of water especially for users of water closet, physical ability of the people who use the toilet, ventilation and limited number of toilet facilities.

Songsore and Stephens (2008) reported that insufficient communal toilets often lead to open defecation along beaches, drains, and open spaces. Furthermore, open defecation is often due to long queues at communal toilet facilities as well as poor maintenance of these facilities.

According to Dittmer (2009), Smell, heat and maintenance, safety of the structure and environmental constraints were the physical barriers to safe disposal of human excreta in selected countries in West Africa. Devine (2010), documented that factors such as limited resources (toilet facilities) together with quality of structures as the main physical barriers to safe disposal of human excreta in East Java. The people of East Java practice ―flying toilet‖, that is, open defecation due to limited number of toilet facilities. The few toilet facilities available are also of poor quality according to the people of East Java. Quality

of toilet has to do with durability, proper ventilation, clean environment and pleasant odour.

Mafuya (2010) investigated the perceived sanitation challenges among rural communities in Eastern Cape to determine the perceived structural, economic, educational, social and technological sanitation challenges in the rural communities of the Eastern Cape. The study involved 122 participants. Perceived structural challenges identified in the study were inadequate facilities that are mostly weak. This makes the community members to prefer open defecation.

2.3 Economic Barriers

Economic barriers to safe disposal of human excreta have also been reported by researchers in some communities around the world. In some countries in West Africa, farmers who could not afford chemical fertilizers encourage defecation in their fields, as it is a ready and cheap source of fertilizer. Building latrines in these communities is perceived as depriving growers of a useful—although hazardous—resource (Dittmer, 2009).

In some selected communities in Ghana, poverty was also mentioned as a typical barrier to safe disposal of human excreta in a study by (Water Aid, 2008). Songsore and Stephens (2008) also reported on the economic barriers to safe disposal of human excreta. The role of economic issues in determining improved sanitation was also captured by Devine (2010). Mafuya (2010) reported that lack of funding was the major economic factor contributing to safe sanitation. There were inadequate funds to build new and to sustain existing structures.

2.4Global sanitation and Impact

The United Nations (UN) Conference on Water, held in Argentina in 1977, declared the decade of 1981-1990 as the International Drinking Water and Sanitation Decade with a target of "water and sanitation for all" (Black & Fawcett 2008).

Despite the aim to improve both water supply and sanitation, most of the attention was put on water supply and at the end of this decade there were 300 million more people without sanitation than at its beginning (Black & Fawcett, 2008). In the UN Millennium Declaration in 2000 global commitment was made to eradicating extreme poverty and increase the health and well-being of all peoples (United Nations 2007).

Eight globally important development targets called Millennium Development Goals (MDGs) were set with the aim of eradicating extreme poverty and hunger, achieving universal primary education, promoting gender equality and women's empowerment, reducing child mortality, improving maternal health, combating HIV/AIDS, malaria and other diseases, improving environmental sustainability and developing a global partnership for development.

In September 2002, the World Summit on Sustainable Development in Johannesburg reaffirmed these goals and added access to basic sanitation as a centerpiece of the poverty e According to WHO/UNICEF (2012) reported that the global drinking water target has been met in 2010, five years ahead of the schedule

Despite the welcoming drinking water news the sanitation development is still inadequate and the world is not on track to meet the MDG sanitation target. 1.8 billion People gained access to improved sanitation facilities between 1990 and 2010, but 2.5 billion people still lack improved sanitation.(Global Monitoring Report 2013, p.96) If the current trends

continue, 2.4 billion people will still lack access to improved sanitation facilities in 2015 and the reached coverage will be 67% instead of the targeted 75% (WHO/UNICEF, 2012) Rockström et al. (2005) stress the importance of the seventh MDG by saying that environmental sustainability is not an isolated goal in itself, but instead forms an integral goal for all the MDGs.

The sanitation target of environmental goal has connections to other MDGs as well. The UN Millennium Project Task Force on Water and Sanitation (2005) emphasize the importance of water and sanitation management for meeting the MDGs and says that improved water and sanitation will promote the achievement of all eight MDGs. Eradication commitments (United Nations 2007). This indicates well the broad influence area of the sanitation and the benefits from the investment to sanitation management with suitable sanitation technology, not only to promote environmental sustainability, but also to the other development goals.

2.5 Health Implications of open defecation

The lack of sanitation leads to disease, as was first noted scientifically in 1842 in Chadwick's seminal on "Report on an inquiry into the sanitary condition of the laboring population of Great Britain". The diseases associated with poor sanitation are particularly correlated with poverty and infancy and alone account for about 10% of the global burden of disease. (Safer et al., 2008). At any given time close to half of the urban populations of Africa, Asia, and Latin America have a disease associated with poor sanitation, hygiene, and water.(WHO, 1999). One gram of fresh faeces from an infected person can contain around 10^6 viral pathogens, 10^6–10^8 bacterial pathogens, 10^4 protozoan cysts or oocysts, and 10–10^4 helminth eggs (Feachem et al,. 1989)

Many human infections are spread through contact with human excreta. Bacteria, viruses, protozoa and parasitic worms cause many diseases that are spread by direct contact with faeces or indirectly via contaminated food and soil. Diarrhoea disease is one of the leading causes of morbidity (illness) and mortality (death) in developing countries, especially among children younger than five years of age.

2.6 Knowledge base of the implication of Open Defecation Free (ODF)

According to Verma (2017) a study on the wash practices and the practice of open defecation, the factors leading to this practice and its health implications in rural Lucknow (2017) revealed that, around 34% of the respondents had a toilet facility in their households while majority of them i.e. 66.4% did not have any kind of toilet facility in their home. When asked whether the toilet facility was functional or not about 77% of the respondents said that the toilet facility was non-functional and it was used for other purposes like storage etc. 60% of the cases the respondents said that there was some member in the family who was going out for open defecation. When the reason for going out for open defecation was asked, many themes like unavailability of the toilets, poverty or the lack of the resources to construct a toilet, old norms of going out in the field and improperly constructed toilets and the feeling of being suffocated inside a toilet were cited out.

According to Akanksha (2018) a cross sectional study among randomly sampled 178 households using interview and observation at Makwanpur District, Nepal" revealed that, proper disposal of solid and liquid waste was found among 32% and 46% of households respectively. About 68% of households had good water, sanitation and

hygiene situation and was found to be significantly associated with related knowledge among mothers irrespective of their economic status.

In the most developing countries the open defecation is the 'way of life'. The habit of open defecation is inseparably integrated in the day to day life of the people especially in the rural areas and urban slums of India. The practice is considered as most serious health and environmental hazard. (WHO Fact Sheet, 2014).It is harder to bend the iron mind of people with regard to open defecation, which they feel that they practice over many generations. This paper is an attempt to bring out the awareness level and practices of 1800 randomly selected households from 60 panchyaths of Namakkal, Perambalur and Pudukkottai Districts of Tamil Nadu on open defecation. The study revealed that open defecation and its attendant medical problems were rampant in the community with nobody even bothering to do anything to overcome it. While open defecation was in practice, many women specially mothers (98%) did not know how to dispose of their children's feaces safely. (Sampath 2014)

2.7 Institutional Support to Latrine construction in Communities

2.7.1 Review of private institutional support

According to Osumanu (2010) Ghana is faced with many sanitation challenges, which is a cost to the nation. As a result, several attempts have been made by the government, private sector and external donor partners to solve these problems. Some of the interventions have been in the area of building institutional capacity through documentation and the development of human resources.

External donor communities including DANIDA, UNICEF, World Bank/UNDP, EU and other international NGOs have been promoting the construction of household latrines in

their various areas of operation through subsidies (DANIDA, 2010). The private sector and especially individuals have contributed to the scaling up of sanitation in Ghana. Studies have found that, although the supply-driven approach with subsidies has had some success in providing improved latrines in South Asia especially, a follow up at a later date revealed that the facilities were not being used or maintained and most were in a state of disrepair (DANIDA, 2010). Giving subsidies to beneficiaries of household latrines was found not to be sustainable and did not promote the scaling up of sanitation and increased community dependency instead of generating real demand (WSP, 2000).

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2.8 Government support to the End of Open Defecation

Some of the approaches developed by the government to solve this problem include the adoption of the Paris Declaration of the Water and Sanitation Decade 1990. The government has also incorporated sanitation into most strategies and major policy documents such as the New Partnership for Africa's Development (NEPAD). The entire

policy framework on sanitation was based on the Ghana Poverty Reduction Strategy II (GPRS), the Millennium Development Goal targets and the Government's coordination with donor assistance (Water Aid, 2005).

Environmental sanitation is incorporated into all sectors of Ghana's economy, particularly in health, education, environmental protection and improvement of human settlements, services, tourism and general economic productivity (MLGRD, 1999).

The Ministry of Local Government and Rural Development together with the Ministry of Water Resources, Works and Housing (MWRWH) is currently responsible for developing sanitation policies and coordinating funding for the sub-sector. These sanitation policies are expected to be implemented by metropolitan, municipal and district assemblies as part of the government's decentralization process and with the support of the Environmental Health and Sanitation Division (EHSD) and the Community Water and Sanitation Agency (CWSA). The CWSA is an executive agency under the Ministry of Works and Housing (MWH) with responsibility for water supply and the delivery of water-related sanitation to rural communities, including small towns (CWSA, 2007).

The EHSD also developed the National Sanitation Policy and the National Environmental Strategic Action Plan (NESSAP) in 1999, which became active only after its revision in 2009. Its aim was to add to the effort in achieving the Millennium Development Goals (MDGs) and towards improving total human development and quality of life. There are other environment and sanitation Acts such as: the Local Government Act of 1994, Act 462; the Environmental Protection Agency Act of 1994, Act 490; and the Environmental Sanitation Policy of Ghana of 1999. All these acts and regulations emanate from the

National Environmental Action Plan. Sanitation, therefore, seems to be woven into the responsibilities of all the ministries without a main ministry to oversee the entire sanitation problem. As a result, implementation becomes a big challenge, considering that several government agencies and ministries are involved.

A coordinating council, the National Environmental Sanitation Policy Coordinating Council (NESPoCC) was put in place in January, 2000 to expedite the implementation of the National Sanitation Policy. The national laws, specifically the Criminal Code (Act 29) of 1960 and the bye-laws of all the 110 MMDAs were revised and were to be enforced to ensure compliance of sanitation rules, which is a major challenge.

The MDG report by National Development Planning Commission (NDPC) of the Government of Ghana and the United Nations Development Programme (UNDP) illustrates that with the current trend of sanitation development, the proportion of the population with access to improved sanitation will reach 21.2% by 2015 instead of the target of 52%, which indicates that there must be approximately five times increase in coverage to be able to achieve the set target (NDPC/UNDP 2010). In Ghana the low coverage of improved sanitation is partly caused by the fact that the Joint Monitoring Programme (JMP) does not classify improved facilities as such if they are shared and as noted earlier, over half of the Ghana's population are using shared facilities. The reason why JMP does not classify shared toilet facilities as improved is because they may not be hygienic, convenient and private enough for users (WSMP, 2008b). Many stakeholders in the sanitation sector in Ghana have said that many shared toilet facilities in Ghana provide all the necessary parameters that characterize an improved toilet facility (WSMP, 2008b). It must also be noted that there is a wide difference in access to sanitation

between the regions and also within the regions between rural and urban areas. For example in the Greater Accra region of Ghana 25% of the population have access to improved sanitation while in the Northern region the corresponding proportion is 3%. Sanitation development has concentrated on urban centres and southern areas, while the poorest coverage is in the northern regions and rural communities (NDPC/UNDP, 2010). According to JMP (WHO/UNICEF, 2012) Ghana has the highest proportion of population using shared sanitation facilities in the world with the record of 58%. If compared to Bolivia, who has the second highest record in shared sanitation category, the difference is 22 percentage points, which illustrates the exceptionally high usage of shared facilities in Ghana. Globally the sharing of the sanitation facility is an urban phenomenon and also in Ghana it is more common in urban than rural areas: 73% urban population is sharing the sanitation facility whereas in rural areas the corresponding proportion is 43%. Instead of sharing the toilet facility, the problem in rural areas is the open defecation as 33% of the rural population is practising open defecation (WHO/UNICEF, 2012). The predominant use of shared sanitation facilities in urban areas is principally due to residence patterns of several households living in compound housing, but a more worrying development is the heavy reliance by many on public toilets (WSP, 2010).

CHAPTER THREE

METHODOLOGY

3.1 Research Design

Both qualitative and quantitative methods was used for the study. For the quantitative study, both close and open-ended questionnaires was designed and administered to selected respondents. Qualitative data was collected using in-depth interviews. For respondents who were illiterates, questionnaires was explained to them in their native language and their responses recorded and transcribed.

3.2Study Area

The study was conducted in two area councils of the Kwahu Afram Plains South District. The Area Council shall be Samanhyia Area Council and Tease Area Council

The Kwahu Afram Plains South District was carved out from the Kwahu North District and forms part of the newly created districts in the country. The District is located between Latitudes 6^0 40^1 N and 7^0 10^1 N; longitudes O^0 40^1E and 0^0 10^I E; at the Northwestern corner of Eastern Region with a total land area of approximately 3,095 sq. km.

The District is bounded to the north by the Kwahu Afram Plains North, to the south by Kwahu South, to the east by the Volta River and to the west by two districts in the Ashanti region precisely Sekyere East and Ashanti-Akim Districts. (GSS, 2010).

The land is generally undulating and rises about 60 metres to 120 metres above sea level. The only high ground is in Bonkurom. The Afram River and the Volta River to the East drain the District to the south, which flow continually throughout the year and can be used for both domestic and agricultural purposes. (GSS, 2010)

The district falls within the savannah vegetation zone comprising the savannah transitional zone and savannah woodland which is characterized by short deciduous fire resistant trees often widely spaced and a ground flora composed of grass of varying heights which is associated by two main rainfall seasons occurring in June and October; the first rainy season starts from May to June and the second from September to October. (GSS, 2010)

The district lies within savannah vegetation zone comprising the savannah transitional zone and savannah woodland. There are few forest reserves covering about 120.8sq km. The forest reserves constitute about 15% of the entire surface area of the district. Some commercial tree species contained in the forest are Milicia excelsa (Odum), Sterculia rhinopetala (Wawa), Terminalia superba (Ofram), Khaya ivoriensis (African mahogany), Antiaris toxicaria (Kyenkyen) etc. (GSS, 2010)

The study communities were selected due to peculiar socio-economic and demographic characteristics as a result of the differences in their physical locations, which invariably influence their defecatory preferences and practices. Moreover, these Communities in the Tease Area Council have not been exposed to Community Led Total Sanitation by Afram Plains Development Organizations and World Vision International in Ghana and hence would give true reflection of Open defecation situation

3.3 Total Population

A total of 297 respondents were selected from the Samanhyia Area Council and Tease Area Councils of the Kwahu Afram Plains South District

3.4 Sampling Technique

The Study was conducted in two area councils of the Kwahu Afram Plains South District. Selection of the households for observation was based on the initial contacts and interaction in the community and with the help of the gatekeepers. Apart from identifying informants and participants through contacts and interactions, the nature and type of question/s to be posed to respondents or discussants was of utmost importance.

All the informants and discussants for the study was purposively selected. They were people that is believed to have rich information and from whom one could learn much about issues of central importance to the purpose of the research (Patton, 1990). Informants and participants was made up of adult males and females and the youth living in the community. A set of selection criteria was developed which aided in hand-picking the informants and participants. Informants for the in-depth interviews will drawn from the Environmental Health and Sanitation Directorate of the District Assembly, Chiefs and Opinion leaders, Water and Sanitation Management Committee (WATSAN). The criteria for selecting key informants shall: being an indigene or migrant who had lived in the community for at least ten years; having good knowledge of the history of the community; and should be above 18 years old. These criteria was given to the various assembly members in the 20 communities to identify forty (40) residents from each of their communities.

Table 3.1: Sample Size

Name of Area Council/	Population	Proportion of respondent
	Tease Area Council	
Ameyaw	57	8
Dimso	67	9
Asukese II	121	17
Offinso	98	14
Praprabaabida	88	13
Asikam	56	8
Sub Total		
	Samanhyia Area Council	
Kwasi Kuma	212	30
Kyemfre	103	15
Mmradan	189	27
Darteykrom	79	11
Somsei	121	17
Sub-Total	704	169

Source: Field Survey, 2019

Proportion of respondents

A proportional sampling technique was used to sample participants for the study.

Proportion of respondent= Population per community/Total population (both councils) *100

Table 3.2: Summary of Data Collection Approach

Research Objectives	Data Source	Method	Sampling Size
1) Determine the social, economic, physical barriers to open defecation in the Afram Plains South District	Interview the community leaders and the Environmental health and Sanitation Unit, Key Informants Household- Inclusiveness	Desk study Transect walk Observation Key informant interviews	Proportion per community- households 10 key informants 5 Staff EHSU of the Assembly A staff from Afram Plains Development Organization A staff from World Vision International In Ghana A staff and the chief and opinion leaders
2) Assess the knowledge base of people on effects Open Defecation Free(ODF)	Households Key Informants Community groups	Observations FGD In-depth interviews	proportion per community- households 10 key informants 5 Staff EHSU of the Assembly A staff from Afram Plains Development Organization A staff from World Vision International In Ghana A staff and the chief and opinion leaders
3) Assess institutional support to Communities to the end of open defecation	NGO's into Sanitation, Environmental Health and Sanitation Unit, chief and opinion leaders and community care groups	In-depth interview	2-The head of the EHSU of the Assembly proportion per community- households 2-staff from Afram Plains Development Organization 2-staff from World Vision International In Ghana 6-chief and opinion leaders 12 community care groups

Sources of Data

Data collection is the means by which data is obtained and recorded about a selected sample for research purposes. There are various methods available for obtaining data. In this research, both primary and secondary source of data was used to obtain the data

Primary Data: The research made use of primary data by collecting information through interviews with respondents and questionnaires. It is designed to make it easier for respondents to answer all the questions with ease. The idea to distribute and collect some of the questionnaires at a later date was seen as a good approach to allow respondents time to read through the questionnaire thoroughly, understand what is expected before answering them.

Secondary Data: The researcher used secondary data such as books, journals, official records, interviews, published information, and relevant research for the writing of the literature review. The books, journals, official records, interviews and recent research which are acknowledged at the end of the research acted as a source of knowledge and reference point to avoid inaccuracies and wrong pronouncements by the researcher.

3.5 Data collection Techniques

Primary data were collected for the study with the questionnaire approach and informal personal interview.

It was typically a self-administered questionnaire. The questionnaires included the pre-coded type of questions, which are provided with answers as well as the open-ended types that had no answers, the respondents were required to provide answers to the open-ended questions.

In addition to the questionnaire, the research also employed personal interview.

3.6 Data Processing and Analysis

The data was checked for distribution and outliers. The questionnaire will coded in Statistical Package for Social Sciences (SPSS) version 17; descriptive statistics was done to derive numerical and non-numerical data presentation models including, graphs, tables and frequencies among others for the quantitative data. For the qualitative, data was coded according to the objectives. Grouping of the coded data was done according to themes after reading through. The recorded interviews was transcribed for the qualitative study and was used in write-up under specific themes.

3.7 Ethical consideration

The research seek informed consent of the respondent, respected the confidentiality and anonymity of the research respondents. All respondents were selected voluntarily.

CHAPTER FOUR

DATA PRESENTATION AND ANALYSIS

4.1 Introduction

This chapter deals with the presentation and analysis of data collected from the questionnaires administered to key informant, focus group discussions and questionnaires administered to respondents.

Demographic characteristics of Respondents

Table 4.1: Age of Respondent

Responses	Frequency	Percent
15-25	4	2
26-35	20	12
36-45	36	21
46-55	64	38
56-65	44	26
66-75	1	1
Total	169	100

Source: Field Survey, 2019

The finding of the study specifies that, 38% of the respondents were between the ages of 46-55 years. 26% of the respondents were between the ages of 56-65 years. 21% were between the ages of 36-45 years. 12% of the respondents were between 26-35 years whiles 2% and 1% of the respondents were between the ages of 15-25 years and 66-75 years. It can be observed that, the majority of the respondents were within the labour force representing 59%.

Table 4.2: Sex Distribution of Respondent

Response	Frequency	Percent
Male	89	53
Female	80	47
Total	169	100

Source: Field Survey, 2019

The table above shows that, the sex distribution of the respondents. From the table, 53% were males whiles 47% were found to be females

Table 4.3: Marital Status of Respondent

Response	Frequency	Percent
Single	28	17
Married	115	68
Widowed	20	12
Divorced	6	4
Total	169	100

Source: Field Survey, 2019

The findings of the survey describe that, majority of the respondents constituting 68% were married. 17% were single. It can be concluded that, majority of the respondents were married.

Table 4.4: Level of Education of Respondents

Response	Frequency	Percent
No formal educational	46	27
Primary education	95	56
Secondary education	22	13
Tertiary education	6	4
Total	169	100

Source: Field Survey, 2019

From the table above, it can be observed that, majority of the respondents have completed primary education representing 56% of the total number of respondents. 27% had no formal education. 13% have completed secondary education whiles 4% have completed tertiary education. From the table, it can be observed that, majority of the respondent had some form of education representing 73%.

Table 4.5: Family size of Respondent

Responses	Frequency	Percent
1-3	11	7
4-6	17	10
7-9	36	21
10-12	38	23
13-15	33	20
16 and above	34	20
Total	169	100

Source: Field Survey, 2019

The findings of the study specifies that, most of the respondents have a family size of 10-12 representing 22.5% .Also 21.3 % had family size of 7-9. 20% had a family size of 13-15. 20% had a family size above 16 and above whiles 10% had a family size of 4-6. Additionally, a family size of 1-3 recorded the least number of respondent representing 7%.

Table 4.4: Ethnicity of Respondents

Response	Frequency	Percent
Ewe	33	20
Akan	107	63
Dagaati	22	13
Other	7	4
Total	169	100

Source: Field Survey, 2019

The findings of the study describes that, the most dominated ethnic group was the Akan representing 63% of the total respondents. 13% were Dagaati. 20% were Ewes whiles 4% of the respondents were from other different ethnic groups thus Ga's, Frafra among others.

Table 4.5: Occupational status of respondent

Response	Frequency	Percent
Fisherman	6	4
Farmer	113	67
Fishmonger	8	5
Trader	39	23
Other	3	2
Total	169	100

Source: Field Survey, 2019

The findings of the study reveals that, 67% of the respondents were farmers whiles 23.1% were traders. 5% of the respondents were fishmongers whiles 4% of the respondents were fishermen. The remaining 2% were pupil teachers

Determine the social, economic, physical barriers to open defecation free

Table 4.6: Are there taboos, norms or values surrounding defecation and human excreta disposal in this community

Responses	Frequency	Percent
Yes	17	10
No	136	81
Don't Know	16	10
Total	169	100

Source: Field Survey, 2019

According to table 4.8, majority of the respondents representing 81% indicated that, there is no taboo that regulates open defecation in the community. However, 10% of the

respondents indicated otherwise. The findings confirms the research of Water Aid (2008) that the practice of open defecation is surrounded by cultural taboos and beliefs and Zombo (2010) that some beliefs and taboos obtained from a community leaders in Bakeh Curve, Koya Chiefdom, Port Loko District of Sierra Leone.

The findings of the study revealed the following taboos that has restricted families to end open defecation.

"…The faeces of in-laws should never mix. To avoid the father-in-law and daughter-in-law's faeces mixing, there are gender-segregated open defecation sites so that the taboo is not broken…"

Another respondent indicated that "… I do not use another family's open defecation site, lest you are bewitched. Our family lineage believes that person's faeces can be used to bewitch us. Therefore, we avoid using a defecation site other than their own. Witchcraft still plays a major role in our community and we have a mortal fear of being bewitched…"

The findings of the study describes that, feaces could easily be picked up and used for witchcraft once they have left. So it is common for people upon visiting a neighboring house to walk all the way back to their own home, should they feel the urge to attend to a 'call of nature'.

Table 4.7: How many days do you spend in to construct latrine facility?

Responses	Frequency	Percent
1-3 days	1	1
4-6 days	3	2
7-10 days	13	8
above 10 days	29	17
Total	46	27

Source: Field Survey, 2019

According to table 4.8, majority of the respondents representing 17% indicated that, it took them more than 10 days to construct toilet facility. 8% indicated 7-10 days period, 2% indicated between 4-6 days period whiles 1% indicated 1-3 days period.

According to the Chairman of the WATSAN committee, *"...Site selection and orientation usually do not take more than a day to carry out this first phase of the construction activity. Much of the time is spent on procurement processess. I will need a huge sum of money to procure all the needed materials for the construction. I will need a concrete ring(32" x 16") at least 3, 1 ring cover, 2 bag of 50kg cement, 10 cement bag of sand, 3 cement bag of Gravels, 280 bricks, I set of pan with siphon, 3 ft HDPE pipe 4" and a skilled labour and mason. As a farmer, I cannot afford to procure all these materials within a day or two. I will have to buy them one at a time. This will take me more than 20 days to get set for the construction..."*

The findings of the study further describes that, excavation in a rock areas also takes more than for people to own a toilet facility. A respondent indicated that *"The rocky nature of the land sometimes extend our time period. I am willing to construct the toilet*

facility but it takes granite before I can successfully dig the hole. This prolong the time to complete the projects and this motivates us..."

A respondent also indicated "… *the time and season can affect their reactiveness to get a toilet facility constructed on time. In the raining season, some of the dug-outs can cave in which will retire the success of the projects and hence more often get demotivated by the raining season*…"

Table 4.8: Do you pay for using toilet facilities?

Response	Frequency	Percent
Yes	1	1
No	168	99
Total	169	100

Source: Field Survey, 2019

According to table 4.9, the findings of the study specifies that, majority of the respondent do not pay for access to toilet facility in their community. 99% of the respondents indicated that, they do not pay for access to toilet facility. 6% of the respondents indicated that, he pays for access to the toilet facility. This confirms the study of Mafuya (2010) who reported that lack of funding was the major economic factor contributing to safe sanitation

A respondent indicated that. *"...I pays GHC 0.30p to access the toilet facility of a neighbor. The GHC 0.30p paid covers my two children and wife. My neigbour told me that, in an instance when the toilet becomes full, he will use the money to pay for its discharge…"*

Table 4.9: Does the cost involved in building a toilet facility hinder you from getting one at home or within the community?

Response	Frequency	Percent
Yes	117	69
No	51	30
Don't Know	1	1
Total	169	100

Source: Field Survey, 2019

The findings of the study specifies that, 69% indicated that, the cost involved in building a toilet facility hinders them from owning a toilet facility. 30% indicated that, the cost do not deter them to construct a toilet facility or own a toilet facility.

In a focus group discussion at Somsei Community, a respondent indicated that, "…*I am a farmer and I earn less than GHC300.00 a month and I pay for my grandchildren school fees and feeding fees. I cannot afford to construct a toilet facility of my own. Instead of using the money for the toilet construction, I will use the money to cater for the wellbeing of my wards which is paramount to me. Education is the key and I must live to leave a legacy full of promising future"*

A retired head teacher also indicated that, *"… the money of yesterday did not have the value to cater for my wards fees and toilet facility. I have six children and the younger one is in senior high School. The education of my wards is very important to me and even though I know the health hazard of the unavailability of toilet, I cannot construct one. I am on retirement; I do not earn any money at the end of the month and hence would find it difficult to pay GHC 1000.00 for the toilet construction..."*

Chiefs and opinion leaders in a focus group discussion also indicated that, artisans charge exorbitantly. The study shows that, some of them takes more than GHC 1500.00, which discourages the Community for the construction of their own toilet facility. We have directed our members to own their own toilet however due to the charges of the artisans we are unable to hold community members. The Chief of Somsei Said.

Table 4.10: Do you have a toilet facility at home?

Responses	Frequency	Percent
Yes	47	28
No	122	72
Total	169	100

Source: Field Survey, 2019

However, the table above indicated that, 28% of the respondents had available toilet facility. 72% of the respondents do not have the toilet facility. Many people who did not have toilet facility indicated the high cost of the toilet building materials and service charge as the main factors that hinders them from acquiring one of their own. The study shows that, 72% people who did not have toilet facility uses the free-range system where they explore a bush or in between houses and defecates there. 1 person defecates on stones whiles 24 defecates in rubber polythene and either towns or bushes.1 person uses flush or pour-flush toilet.

Table 4.11: Distance to defecation sites

Responses	Frequency	Percent
0-59 seconds walk	1	1
1- 5 minutes' walk	10	6
6- 10 minutes' walk	3	2
Total	14	8

Source: Field Survey, 2019

According to table 4.14, 6% of the respondents walk less than 5 minutes to the defecation site. 2% of the respondents walk between 6-10 minutes whiles 1% uses less than 59 seconds to visit the defecation site.

The findings of the study reveals that, distance covered to access toilet facility does not trigger them to own a toilet facility. 25% of the respondents were dissatisfied with the distance to defecation site however 75% were satisfied with the distance

A respondent indicated that, "… *I have no option since I cannot own a toilet facility, I am not perturbed. As long as I can get-ride of the feaces I am okay…"*

The focus group discussions indicated that, community members enjoy defecating in bushes and love to defecate. They mentioned that, they dot pay for access to an open defecation site and feaces are not seen the next day due to the free ranch of pigs. The pigs eat the feaces and the place is always clean.

4.2 Assess the knowledge base of people on effects Open Defecation Free (ODF)

Table 4.12: Do you think every house should construct sanitary toilet?

Responses	Frequency	Percent
Yes	133	79
No	36	21
Total	169	100

Source: Field Survey, 2019

The findings of the study revealed that, 79% of the respondent had adequate knowledge on the advantages of sanitary toilet facility whiles 21% did not have any knowledge on the importance of sanitary toilet facility.

A farmer indicated that *"…I spent almost the whole day in the farm. I normally use the open space to defecate and hence do not see the relevance of owning a toilet facility when its usage would be less…"*

The findings of the study further established the following significances of sanitary toilet facility during the focus group discussions.

A respondent indicated "…*Sanitary toilet facility helps prevent the spread of diseases…"*

The head teacher of Bebuso Primary School indicated *"…The availability of toilets is even shown to increase the school attendance of teenage girls, who may not go to school during their menstrual cycle…"*

The WATSAN committee chairperson of Bebuso Community also indicated that "… The *waste from infected individuals in the community can contaminate a community's land and water, increasing the risk of infection for other individuals…"*

The District Environmental Health Officer in the Kwahu Afram Plains South District mentioned that *"...Without proper sanitation facilities, people often have no choice but to live in and drink water from an environment contaminated with waste from infected individuals, thereby putting themselves at risk for future infection. Inadequate waste disposal drives the infection cycle of many agents that can be spread through contaminated soil, food, water, and insects such as flies..."*

Table 4.13: Do you know an appropriate measure to usage of sanitary toilet facility

Responses	Frequency	Percent
Yes	59	34.9
No	110	65.1
Total	169	100.0

Source: Field Survey, 2019

The findings of the study describes that, 65% of the respondents know an appropriate measure to use of toilet facility whiles 35% do not know any measure to ensure sanity at the toilet facility. The findings confirms the research that was conducted by Akanksha (2018) which indicated that, about 68% of households randomly sampled in 117 households knowledge on good water, sanitation and hygiene situation.

The study further established that, the 35% were mostly people who defecate in bushes. A respondent indicated that *"... I defecate in the bush and in the bush, I do not clean the place. The pigs eats the faeces during the day. So I do not know any measure ensure cleanliness if the toilet facility. The pigs are our cleaners..."*

During the focus group discussions, the study further established the following measures from the respondents;

According to a respondent *"... Through the intervention of World Vision, I participated in a handwashing workshop and I got to know that, one must wash the hands thoroughly after visiting the toilet..."*

A pupil from Koranteng Primary school indicated *"...using liquid soap is a better option than bar soap as the latter could be a source of infection..."*

Another respondent also indicated that "...*Wash your hands thoroughly with soap every time you use the toilet..."*

Table 4.14: Are there local regulations to discourage OD in the community?

Responses	Frequency	Percent
Yes	2	1
No	167	99
Total	169	100

Source: field survey, 2019

The findings of the survey describes that, 99% of the respondents indicated that there is no local regulation that discourage open defecation (OD) in the community. 1% of the respondent indicated that, there is a local regulation that restricts open defecation.

Findings from the focus group discussions indicated that, majority of the respondents do not have toilet facility and hence practice open defecation and most of the opinion leaders sees no problem with it. This Confirms Water and Sanitation Programme research which indicated that, 33% of the rural population practice open defecation despite the various institutional supports and mechanisms due to heavenly reliance by many on public toilet and lack of local regulation to enforce and restrict people who defecate openly(WSP,2010)

An opinion leader indicated that, *"... I am aware that open defecation is not good however; we cannot restrict members not to defecate in bushes. Community members have complained on the cost of materials and other charges. We therefore became considerate and hence until 20 years to come, I do not think we can restrict members not to defecate in bushes..."*

Another opinion leader indicated that, *"... I saw the need for a local regulation but sometimes lineage influences the enforcement of the rules. I might not default but my nephew might default and as a leader of the community, I cannot allow my nephew to face the law. I will plead for forgiveness. When this happens, if other family members defaults I cannot say he should be sanctions because I my nephew was set free..."*

The findings of the study further specifies that, respondents were guided by set of guidelines that regulates open defecation. The community has restricted members not to defecate openly but rather should join others who have some facilities. However they have given a year momentum for each household to have a toilet facility. Amidst this, members still defecate openly, the respondents alluded

The study further maintained that, the byelaws are not enforced since most of the respondents through focus group discussions indicated that, they are were not aware of the existence of byelaws.

4.3 Assess institutional support to Communities to the end of open defecation

4.3.1 Non-Governmental Supports to end open defecation

World Vision is an international Christian development, relief and advocacy organization dedicated to help bring fullness of life to children, their families and communities. Each one of us shares our God-given talents and resources to make a difference in this world. (www.wvg.org). The Afram Plains Area Programme of World Vision Ghana implements four key projects geared towards improving the livelihoods of families and children in the Kwahu Afram Plains District. The projects are; Sponsorship improvement programming (SIP), water, sanitation and hygiene project (WASH), Reading Improvement in Primary Education (RIPE) and KOICA UNLOCK Literacy Project. (field report, 2019)

4.4 Efforts of the Organization to end open defecation

According to the WASH technical project officer, the Afram Plains Area Programme of World Vision Ghana have worked in so many outcomes to ensure that, communities and schools have safe places for human excreta.

The study further established that, the organization has intensified hand-washing education and demonstration through collaboration with the School Health Education Programme department of the Ghana Education Service and the Environmental Health and Sanitation department has been beneficial in the promoting of good hygiene practices especially among children. The Afram Plains Area Programme facilitator revealed that, hand washing facilities (tippy tap) installed at the entrance of 'Kids Club' venues has gone a long way to strengthen the habit in children in the Afram Plains communities.

Each child before entering the premises for child club activities are required to wash their hands.

A pupil from Bebuso indicated that, "*...now I am able to wash my hands properly before and after visiting the toilet facility.*

The study further maintained that, these children report that they are able to wash their hands at home because they are required to do at school and at any gathering to protect them from disease.

The WASH technical project officer maintained that, in partnership with the District Assembly, Environmental Health Department and other stakeholders the organization tolled out the community led total sanitation in 10 communities in the Afram Plains District. She mentioned that, the CLTS methodology uses self-assessment means to bring to light a communities need for proper sanitation where human excreta is separated from human contact while refuse dumps are managed properly and hand and environmental hygiene practices are upheld.

The study further describes that, a total of 59 new and sustainable latrines constructed in five (5) communities and in use as a result the CLTS methodology together with over 60 more at various stages of construction is in the right direction to enable these communities achieve open defecation free status. (Extract FY 19 Annual report). In Akwesi Addae, one of the implementing communities, the chief of the community indicated that, *"...together with my community elders, I have ensured to led process in ensuring that households take necessary steps to own and use latrines. By being the first to heed the call, I inspired MY community members to do same and now we have more that 80% toilet facility in the community. It is shameful to direct a visitor to the bush to*

practice open defecation. From having only 4 latrines in my community, we can now boast of 26 latrines…"

4.5 Effort of Government and Decentralized Department to end open defecation

According to the District Environmental health Officer of the Kwahu Afram Plains South, the Afram Plains South District has enacted byelaws to deal with sanitation related issues in the District including prosecution and fines.

"…..the environmental health unit has given a 24 month ultimatum period for landlords to construct toilet facilities and in order to achieve this; we have formed sanitation task force to arrest people who defecate openly. This task force will work very early in the morning and late at night and support the assembly to prosecute offenders…" The District Environmental health officer said

The study further established that, the District has made allocation of GHC 10000.00 to end open defecation within 2019 however, no single amount has been released for the construction of the toilet facility or end open defecation. World Vision

This confirms in literature that, external donor communities including DANIDA, UNICEF, World Bank/UNDP, EU and other international NGOs have been promoting the construction of household latrines in their various areas of operation through subsidies (DANIDA, 2010).

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATION

5.1 Introduction

This chapter consists of summary of the findings, conclusions and recommendations. The prime motive for this research was to inform the management of the Kwahu Afram Plains District and its partners of the barriers to end open defecation.

5.2 Summary of Findings

Determine the social, economic, physical barriers to open defecation in the Afram Plains South District

The findings from the survey describes that, the cost of constructing toilet facility is key determinant for open defecation in the Kwahu Afram Plains South District. 69% indicated that, the cost involved in building a toilet facility hinders them from owning a toilet facility. 30% indicated that, the cost do not deter them to construct a toilet facility or own a toilet facility. Furthermore, the findings of the survey revealed that, 72% of the respondents do not have the toilet facility. Many people who did not have toilet facility indicated the high cost of the toilet building materials and service charge as the main factors that hinders them from acquiring one of their own These are a major issue that needs attention.

Assess the knowledge base of people on effects Open Defecation Free (ODF)

From the analysis, it can be observed that, 64% alluded that, every household should own a sanitary toilet facility however in terms of measures to ensure sanity at the toilet facility whiles 65% were not able to articulate a measure to the usage of sanitary toilet Facility . 74% were not able to articulate a measure to ensure cleanliness at the toilet facility

Assess institutional support to Communities to the end of open defecation

From the results, it can be observed that, the District Assembly is trying possible to end open defection however weal legislation implementation and inadequate funds to support vulnerable families to own a toilet facility has worsen the situation of communities to be declared open defecation free.

5.3 Conclusion

The research concludes that, the inability of households to construct toilet facility highly influenced the state of open defecation in Communities and this is translated into the limited toilet facilities in Communities

5.4 Recommendations

- The research concludes that principle of credit financing may be considered in assisting households to construct home toilets.
- There is a need to develop appropriate finance mechanisms, through partnerships with District authorities and local financial institutions that ensure financial discipline and ability to recover the cost of investment.
- Community-led initiatives that draw on the creativity and capacity of local people to take control of their change processes must be integrated into open defecation intervention programmes·

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APPENDIX

QUESTIONNAIRE

PRSBYETRIAN UNIVERSITY COLLEGE, GHANA

DEPARTMENT OF ENVIRONMENTAL AND NATURAL RESOURCE MANAGEMENT

INFORMATION IS HEREBY SOLICITED THROUGH THIS QUESTIONNAIRE FOR ACADEMIC RESEARCH PURPOSES. ANY INFORMATION PROVIDED FOR THE PURPOSE OF THIS RESEARCH WAS KEPT CONFIDENTIAL. RESEARCH QUESTIONNAIRE TOPIC: BARRIERS TO OPEN DEFECATION IN KWAHU AFRAM PLAINS SOUTH DISTRICT.

The main objective of the study is to ASSESSMENT OF OPEN DEFECATION IN KWAHU AFRAM PLAINS SOUTH DISTRICT, GHANA. My name is……a student from Department of Environmental and Natural Resource Management, Presbyterian University College, Ghana pursuing MSC in Environmental Health and Sanitation

As part of my academic fulfillment, I am conducting a research on the topic barriers to safe disposal of human excreta in Afram Plains South District. I would be grateful if you could avail yourself to participate in this survey.

Date of interview: ……..……..……

Questionnaire number:…….

Place of interview: ……

Biological information of respondent

1. Sex of respondent a. Male **b.** Female	**4. Family Size of Respondent** A. 1 B. 2 C. 3 D. 4 E. 5 F. 6 and above
2. Marital Status A. Single **B.** Married **C.** Widowed **D.** Divorced **E.** Others-please specify……	**5. Ethnicity** A. [ ] Ewe B. [ ] Akan C. Dagaati E. [ ] other, please specify……
3. Educational status **A.** No formal educational B. Primary education C. Secondary education D. Tertiary education E. Other (Please specify)……	**6. Occupational status** A. Fisherman B. Farmer C. Fishmonger D. Trader Others (Please Specify)……

<u>Access barriers to open defecation in communities</u>

6. Are there taboos, norms or values surrounding defecation and human excreta disposal in this community?

A. [ ] yes

B. [ ] no

C. [ ] Don't know

7. If yes, mention some of the taboos you know

……

……

……

……

……

……

8. Does the time required to construct a toilet facility demotivates you to construct latrine?

A. [ ] yes

B. [ ] no

C. [ ] Don't know

9. If yes, how many days do you spend in to construct latrine facility

A. [ ] 1 to 3 days

B. B. [ ] 4-6 days

C. C. [ ] 7- 10 days

D. [ ] Above 10 days

10. Do you pay for using toilet facilities?

A. [ ] yes

B. [ ] no

C. [ ] Don't Know

11. If yes, do you pay for all your dependents to use a safe toilet facility?

A. [ ] yes

B. [ ] no

12. How much do you pay? (Ghana pesewa). If No skip to Number 12

A. [ ] GHC 0.10p

B. B. [ ] GHC 0.20p

C. C. [ ] GHC 0.30p

D. D. [ ] GHC0.40p

E. E. [ ] 0.50p

F. F. [ ] Other please specify……

13. Does the cost for paying to access toilet facility hinder you?

A. [ ] yes

B. [ ] no

C. [ ] Don't Know

14. Does the cost involved in building a toilet facility hinder you from getting one at home or within the community?

A. [ ] yes

B. [ ] no

C. [ ] Don't Know

15. If yes, how much does it cost to construct a latrine?

A. Under GHC300.00

B. B. between GH301.00-GHC 600.00

C. C. between GHC 601.00- GHC 900.00

D. D. Between GHC 901.00- GHC 1200.00

E. E. above GHC 1200.00

16. Do you have a toilet facility at home?

A. Yes [ ]

B. No [ ]

17. If yes, how far is the latrine from the room?

A. [ ] 0-59 seconds

B. B. [ ] 1- 5 minutes' walk

C. C. [ ] 6- 10 minutes' walk

D. D. [ ] 11-20 minutes' walk

E. E. [ ] other please specify……

18. Does the distance from your room to the place of convenience to restrict to defecate openly?

A. [ ] yes

B. [ ] no

C. [ ] Don't Know

19. If no which facility do you use?

A. [ ] free range

B. [ ] at the beach

C. [ ] on the stones

D. [ ] wrap and throw

E. Other please specify…….

20. Is your place of human excreta disposal convenient at any time? (day or night)

A. [ ] Very Convenient

B. [ ] somewhat Convenient

C. [ ] neither convenient

D. [ ] somewhat not convenient

E. [ ] very Poor

21. If "very convenient" mention some of factors that makes the place convenient?

……

……

……

22. How often is the place cleaned?

A. [ ] No cleaning

B. [ ] daily

C. [ ] twice a day

D. [ ] weekly

E. [ ] every fortnight

F. [ ] every fortnight

G. [ ] other, please specify ……

Assess the knowledge base of people on effects Open Defecation Free (ODF)

VARIABLES	**RANKS**		
	YES	**NO**	**DON'T KNOW**
23. Knowledge of sanitary			

toilet			
24. Advantages of sanitary toilet			
25. Do you think every house should construct sanitary toilet			
26. What sanitary measures should be taken during toilet use			
27. How sanitary toilet should be cleaned			
28. How frequently sanitary toilet should be cleaned			

29. If question 28 is yes, mention some of the advantages of sanitary toilet facility?

……

……

……

……

30. Are there local regulations to discourage OD in the community and these are being applied

A. [ ] Yes

B. [ ] No

31. If yes, mention some of the local regulations in the Community

……

……

……

CHECKLIST

Observational/transect walk assessment of knowledge base of respondent to end open defecation

Handwashing Facility availability

Hand washing Practice	**YES**	**NO**
Are there any hand washing facilities close to latrines		
Is there soap/ash or other cleaning agent		
Is there clean water in the hand washing facility		

General Environmental Conditions

General Environmental Conditions	**YES**	**NO**
Are the designated community refuse dumps protected		
Is the refuse dump under proper care (management)		
Is the path to the refuse dump clear		

Is there evidence of dumping elsewhere (littered around another point)		
Are lanes and alleys between houses clean		
Overgrowth of weeds controlled to a minimum		
Animal droppings controlled to a minimum		

Assessment of Institutional support to end Open defecation in Afram Plains South District

What kind of technical support does your institution provide to communities to end open defecation in the Afram Plains South District?

……

……

……

……

……

……

……

……

What financial support does your institution provide to communities to end open defecation in the Afram Plains South District?

If yes, how much have you given to the Communities for the past 3 years

YEAR	1	2	3
AMOUNT(GHC)			

What are the barriers to open defecation in communities in Afram Plains South District?

……

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……

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