

**THE ROLE OF NGOs IN THE PROVISION OF WATER AND SANITATION IN  
NORTHERN GHANA: THE CASE OF PRONET IN THE NADOWLI  
DISTRICT**

**by**

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**of**

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## DECLARATION

I, the undersigned, hereby solemnly declare that I have wholly undertaken the dissertation submitted herein. It is the outcome of my own research, however, other people's work were consulted and have been duly acknowledged.

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## DEDICATION

I dedicate this work to my parents, Mr. and Mrs. Dangah whose care and love spurred me on to pursue this course.

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## ACKNOWLEDGEMENT

I am grateful to God Almighty whose grace, mercy, guidance and care have seen me through all these years of academic pursuit. To Him be the glory.

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## ABSTRACT

Availability of water and good sanitation contributes significantly towards improving human lives and in the development of every country. But central governments have not been able to meet the needs of the citizens due to financial constraints and other competing demands. This has inspired NGOs to assist communities in acquiring such facilities. This research therefore examines the role of ProNet, an NGO with its operational base in Northern Ghana, in providing water and sanitation to the people of Nadowli District. The research made use of both primary and secondary data. One hundred and eighty nine respondents from five communities were interviewed. These respondents were chosen using the simple random and purposive sampling techniques from the communities of Donjang, Sankana, Loho, Gbangko and Goriyiri. Most of the respondents were interviewed individually in Dagaare. Focus Group Discussions were conducted in two communities. The SPSS version 16 software and the descriptive methods of data analysis were used. Some findings of the research include; the water and sanitation coverage is 67.1% and 11.1% respectively in the Nadowli District: ProNet activities have spread throughout the District especially to the remotest areas: Education in the study area has improved due to the fact that pupils are now able to go to school regularly, early and on time. This has improved their living standards. Cemeteries have been created outside the communities instead of burying corpses within the communities and monthly clean up exercises are held to keep the communities clean. The study recommends that there should be effective monitoring and evaluation of the facilities provided by the District Water and Sanitation Teams. The conclusion drawn from the analysis was that Pronet's activities in water and sanitation in the Nadowli District has gone a long way to improve the lives of the people. This research therefore, argues that NGOs have made a major contribution to the provision of water and sanitation in the rural Ghana.

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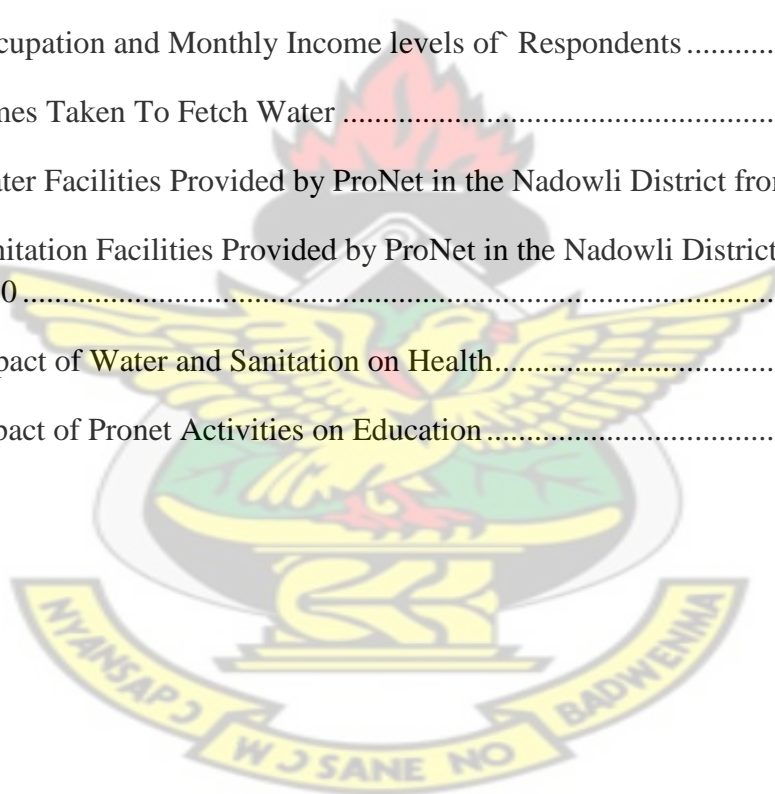
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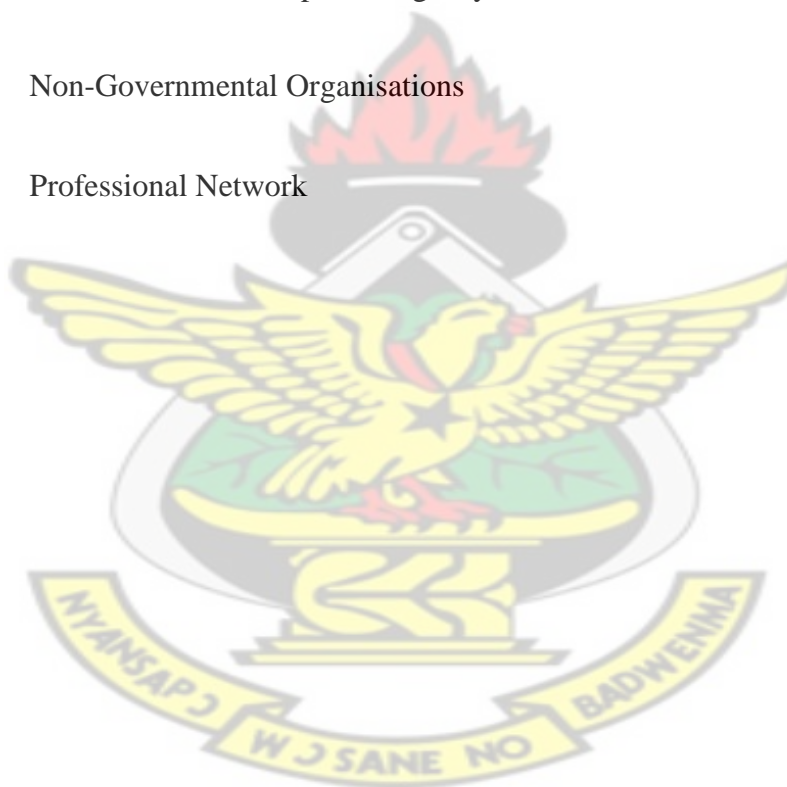
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## LIST OF ABBREVIATIONS

ADB-	African Development Bank
CWSA-	Community Water and Sanitation Agency
DANIDA-	Danish International Development Agency
DFID –	Department of Foreign and International Development
GTZ-	German Agency for Development Co-operation
IDA-	International Development Agency
NGOs-	Non-Governmental Organisations
ProNet-	Professional Network



## CHAPTER ONE

### 1.0 GENERAL INTRODUCTION

#### 1.1 Background to the Study

Lack of potable water and basic sanitation (toilet) facilities are undermining efforts to end extreme poverty and disease in the world's poorest countries. The state of human health is inextricably linked to a range of water-related conditions: safe drinking water; adequate sanitation; minimised burden of water-related diseases and healthy freshwater ecosystems. Urgent improvements in the ways in which water use and sanitation are managed are needed to improve progress towards meeting the Millennium Development Goals (MDGs) related to human health (WHO, UNICEF, JMP, 2008). Clean water and sanitation have been identified as one of the necessary tools for the development of every country. This informs its inclusion in the Millennium Development Goals. The Millennium Development Goal 7c specifically seeks to reduce by half the number of people in the world without access to good water and sanitation.

The WHO/UNICEF (2010) Global Annual Assessment of Sanitation and Drinking Water (GLAAS) update report estimates that 884 million people do not have access to clean water and 2.5 billion suffer from inadequate sanitation. About 27% and 13% of people in Africa face the problem of unsafe water and poor sanitation respectively. Available statistics on water and sanitation in Ghana show that, about 51% and 39% of the rural and urban populations respectively do not have access to potable water. The situation for sanitation is however worse only 13% of the Ghanaian population have access to improved sanitation as against the MDGs target of 54% by 2015. Rural coverage of sanitation is 8% whilst urban coverage is 15%, with 20% of Ghanaians practising open defecation (Ghana News Agency, 2011).



Women, children and girls particularly suffer disproportionately from water and sanitation related problems. Women and girls in developing countries spend most of their days gathering water for their families, walking 3.5 miles on average each day to fetch water to meet daily household chores.

Globally, diarrhoea is the leading cause of illness and death, and 88% of diarrheal diseases and deaths are attributed to inadequate access to sanitation facilities, coupled with unsafe drinking water. High incidence of vector-borne disease, intestinal disease, trachoma, and arsenic poisoning in developing countries are strongly correlated with insanitary practices and the absence of nearby sources of safe water (WHO/ UNICEF JMP, 2008). Therefore, poor health resulting from inadequate water and sanitation robs the children of schooling and the adults of earning power (WHO/UNICEF, JMP Report 2005).

Although the rural poor in developing countries like Ghana contribute much to the economies of such countries through primary economic activities such as agriculture, there is little benefit derived by them in terms of social services (Kyei, 2008). There is great disparity in rural-urban development. Urban areas are mostly developed with the expectation that the effects of such massive development will trickle down to the rural areas, but this is not mostly the case. As such poverty and its associated menace are more prevalent in the rural areas.

Within the last decade, governments of developing countries including Ghana have implemented policies and programmes such as the setting up of the Community Water and Sanitation Agency to help provide potable water and better sanitation to the rural areas which is aimed at rooting out rural poverty and accelerating rural development. This is

made possible through the district assemblies which represent the central government. But governments in developing countries recognise that the public sector alone cannot provide adequate water and sanitation for all.

In recognition of the limited capacity of government in meeting all the essential service needs of its citizenry, various non-governmental organisations have come in to lend a hand in the provision of a wide range of social amenities including water and sanitation in the rural areas. Some of the notable non-governmental organisations in the Nadowli District of the Upper West Region are World Vision International, Plan International, Catholic Relief Services, ProNet, Suntaa Nuntaa, Adventist Development and Relief Agency. These non-governmental organisations are involved in various activities ranging from agriculture, agro-forestry, micro finance, and women empowerment, HIV-AIDS through to water and sanitation and education (Department of Social Welfare, Nadowli, 2007). The activities of these NGOs have led to some improvement in the standard of living of the people in the district; for instance, provision of school uniforms to needy pupils, provision of school buildings, provision of a balanced meal to pupils to attract them to school and supplement their nutrition, child rights education, loans to women to grow their businesses, provision of bore-holes to communities among others. These forms of support from the NGOs have helped to improve enrolment and sustain children in school and empowered women.

This research therefore, examines the role NGOs play in providing water and sanitation in the Upper West Region. ProNet has been selected for this study because it is one of the oldest non-governmental organisations into water and sanitation in rural Ghana.

## 1.2 Statement of the Problem

Ghana faces serious constraints in meeting the task of providing adequate water and sanitation for all rural and urban residents. There is the need to substantially increase the outputs from its water and sanitation sector if the Millennium Development Goal related to water and sanitation is to be met. In rural areas, District Assemblies need to be properly funded to fulfil their responsibilities for water and sanitation services. To ensure that there is no duplication of efforts in some communities to the neglect of others, sector players-government, donors and NGOs need to identify both an effective mechanism for coordination and also arrangements for collecting and publishing data about their activities so that they are properly accountable to Ghanaians. The calculated coverage or number of people served by functional water facilities in Nadowli District is about 59,825 indicating 67.1% of the estimated population. This implies that about 32.9% of the population does not have access to potable water (MLGRD, 2008). Although the District has an improved coverage in water supply, the District Water and Sanitation Report (2009) indicates that majority of the boreholes in the district have either broken down or dried up. This has also led to the drop in the water coverage in the district. The cropping up of new settlements due to population increase has also brought about the need to provide more water facilities in the emerging communities. The report also indicates that out of 168 communities within ten Area Councils and with a population of about 95,124 (per 2010 projection), eight of these communities have no potable source of water, with thirty-six broken-down boreholes, sixteen condemned bore-holes and thirty-two non-functional bore-holes (District Water and Sanitation Programme update Report 2009). The statistics above show that the water facilities provided are inadequate to even areas which are privileged to have them. Notwithstanding this problem, the distance covered by the people to the source of water is

about one mile, therefore, forcing them to resort to the ponds and streams nearby which causes diarrhoea, cholera and skin diseases.

Sanitation is also a major problem in the Nadowli District. The District Water and Sanitation Report (2009) indicate that the population is served by six water closet, forty-five Kumasi Ventilated Improved Pits (KVIP) and seven Ventilated Improved Pits (VIP) representing 11.1% coverage of the District. These facilities serve a population of about 95,124 (as per 2010 projections) within ten Area Councils therefore making it woefully inadequate. This compared with the Kumasi Metropolis with a population of about 1,826,000 (as per 2010 projection) in which about eighty percent of the population is served by toilet facilities ranging from water closet to the bucket latrine system (MLGRD, 2008). What is worse is the improper management and maintenance of most of the facilities. The people have neglected these facilities and resorted to open defecation. This practise poses serious environmental and sanitation problems. The government of Ghana through the Nadowli District Assembly has already spent over GhC 420.000 from the HIPC fund and with support from other donor agencies like the World Bank towards water and sanitation projects in Daffiama and other communities in the district (Ghana News Agency, May, 2006). Two ten seater KVIPS have been constructed for two communities and 5 six-seater KVIPS have also been constructed for four communities with funding from the District Assembly Common Fund (DACF) and the Member of Parliament's (MP) Fund. With all these efforts made by the government, a lot more still needs to be done. Therefore, the Nadowli District Assembly has prepared an Action Plan with an objective to achieve 100% access to potable water and 45% access to sanitation (toilet facilities) by the year 2013. The major source of funding according to this document will be from NGOs (Nadowli District Water and Sanitation Plan, 2009-2013).

In the Nadowli District alone there are four NGOs involved in water and sanitation but there has not been any research on the role played by NGOs in the provision of water and sanitation in the district. This study therefore seeks to find out the role of ProNet in the provision of water and sanitation in the Nadowli District.

The study attempts to answer the following questions;

1. What was the water and sanitation situation in the Nadowli District before the intervention of ProNet and its implication on the health, education and economic activities of the rural people?
2. What are the effects of ProNet interventions in the areas of water and sanitation on the health, education and economic activities of the people?
3. What is the extent of collaboration between ProNet and other stakeholders in water and sanitation delivery in the Nadowli District?
4. What are the challenges and prospects in future provision of water and sanitation in the Nadowli District?

### **1.3 The Study Objectives**

The general objective of the study is to assess the contribution of ProNet in the provision of water and sanitation in rural Ghana. Specifically, the study seeks to find out:

1. The water and sanitation situation in the Nadowli District before the intervention of ProNet and its effects on the health, education and economic activities of the rural people.
2. The effects of the interventions of ProNet on the health, education and economic activities of the people.
3. The extent of collaboration between ProNet and other stakeholders in water and sanitation delivery in the Nadowli District.



4. The challenges and prospects for the future of water and sanitation in the Nadowli District.

#### **1.4 Research Propositions**

The following propositions will serve as a guide to the study:

1. Water and sanitation have a positive relationship with health and productivity.
2. NGOs play a key role in water and sanitation delivery in rural Ghana and are one of the most important avenues for the attainment of the water and sanitation related MDGs goal 7c, which aims at reducing by half the population in the world without adequate water and sanitation.
3. There is collaboration between NGOs and other stakeholders in the provision of water and sanitation facilities in rural areas.

#### **1.5 Study Methodology**

The following methods and techniques were adopted in realizing the objectives of the research.

##### ***1.5.1 Sources of Data***

Both primary and secondary sources of data were used for the study. Primary data was gathered directly from the study area through fieldwork. The principal respondents included staff of ProNet, Nadowli District Assembly, WATSAN members and a cross section of people in the selected communities in the district. The specific tools for data collection included field observation, structured questionnaires, interviews and focused group discussions. Secondary data included information obtained from sources such as

existing literature and documents and Annual Reports of ProNet and the District Assembly, books, journals and also from the internet.

### **1.5.2 Sample size**

A sample size of 189 respondents was used from the communities of Sankana, Loho, Gbangko, Donjang and Goriyiri. These communities were chosen because they are among the communities for which ProNet has provided water and sanitation facilities. Also, ProNet has operated in these communities for between three to seven years. Thirty nine respondents each were selected from Sankana and Gbangko, 35 from Donjang, 36 from Loho and 31 from Goriyiri. The difference in sample size was as a result of the number of households in each community. This sample size was used because of the time range in which the research was to be completed and the financial resources available to the researcher. Table 1.1 indicates the number of respondents chosen from each community.

**Table 1.1: Study Communities**

Community	Number of respondents
Donjang	35
Sankana	39
Loho	36
Gbangko	39
Goriyiri	31
Total	180

**SOURCE: Field Survey, May 2011**

Purposive sampling technique was used to select nine respondents from ProNet (3); the Nadowli District Assembly (3) and the CWSA (3) for the study. This sampling technique was used because it aided the researcher to deal directly with the officials with specialist knowledge of the activities of ProNet and could therefore provide the required data. Dangah et al (2008) used the purposive sampling technique to select officials involved in



tourism promotion on their study of the impact of tourism on the socio-economic development of Cape Coast.

### ***1.5.3 Sampling Technique***

After selecting the research communities, the simple random sampling procedure was used to select the actual respondents from each community by means of the fishbowl method. By this method, households in the selected communities were numbered; then these numbers were written on pieces of paper and put in a bowl and picked randomly. This was done to ensure that every household stood an equal chance of being selected. They included family heads, women and children. Children between the ages of 10-14 were interviewed to assess the impact of water and sanitation on education. The focus group discussion was conducted after questionnaires were administered. This was done to gather additional information for the research. The FGD lasted 30 minutes each in Goriyiri and Gbangko. It had 8 females in each group who were pito brewers. The respondents during the FGD answered questions with reference to the water and sanitation situation before and after the intervention of ProNet and its impact on their livelihoods. The discussions were recorded while the secretary also writes down some points on the information given.

### ***1.5.4 Methods of Data Analysis***

The primary data was edited, coded and analysed using descriptive statistics. The SPSS (version 16) software was used. The results are presented in the form of tables, charts and cross-tabulation to establish relationships or association among the key variables. Pictures were also used to show the actual situation before and after the intervention of ProNet. The main concerns were their effects on the activities of the people. Qualitative data from

the interviews and focus group discussions was also analysed by looking at the specific responses in terms of their similarities and differences, sometimes employing direct quotes. This was done to supplement the quantitative analysis.

## **1.6 Limitations of the Study**

The study faced a lot of challenges. Prominent among them included the following:

First, there was a problem of coverage since the households involved are dispersed. It therefore made it time consuming to cover one community. This was overcome by employing the help of three people who were trained by the researcher to administer the questionnaire. They were trained to write only the relevant responses when they interviewed respondents. Secondly, there was lack of interest from some of the respondents. The respondents explained that they were always called on to respond to questionnaires but no action has been taken on some problems they have raised. The researcher overcame this by explaining to them that the research is purely for academic purposes.

## **1.7 Relevance of the Study**

The relevance of water and sanitation to rural development has led to its inclusion in the Millennium Development Goals. Specifically, Goal 7 seeks to reduce by half the water and sanitation situation in the world by the year 2015. Therefore, Government and other agents of development have contributed immensely towards the provision of water and sanitation in rural Ghana and a lot of research have been carried out in this regard. NGOs have not been left out in the provision of water and sanitation facilities, but not much research has been done in this regard. The work therefore bridges the gap in knowledge in the area of

NGOs contribution to the provision of water and sanitation facilities. Also, it is hoped that findings will serve as reference material for other researchers who may want to further the research on water and sanitation problems.

Furthermore, the study will serve as a guide to NGOs and district assemblies on what policies to adopt to improve water and sanitation in rural Ghana. Finally, this study will serve as a guide to policy makers, donor organisations and the general public on the activities of NGOs, particularly in rural areas.

## **1.8 Organisation of the Study**

This study is organised into six chapters. The first chapter consists of the general introduction which includes introduction, background of study, problem statement, and objectives of the study, the study methodology and justification of study. Chapter two deals with literature review and conceptual issues. The third chapter deals with the profile of the study area, which comprises location and size, climate, vegetation, geology and soils, population characteristics, settlements, education, health and economic activities. Chapter four is dedicated to the impact of the interventions of ProNet on the health, education and economic activities of the people. Chapter five captures the extent of collaboration between ProNet and other stakeholders and their challenges and prospects for the future. Chapter six, which is the final chapter, looks at the summary of the study, conclusions and recommendations.

## **CHAPTER TWO**

### **2.0 LITERATURE REVIEW AND CONCEPTUAL FRAMEWORK**

#### **2.1 Introduction**

A healthy human resource is a necessity for the development of every country. Water and sanitation constitutes some of the basic necessities of life. This chapter aims at situating the work in the proper scholarly context. The chapter consists of two parts; the literature review and conceptual framework. With the literature review, an attempt is made to bring to bear on the study the works of others. This includes the history, definitions, roles and impact of NGOs.

#### **2.2 History of NGOs**

All over the globe there is an upsurge in the establishment of private, non-profit or non-governmental organizations dedicated to alleviating poverty among the rural poor. The concept of NGOs came into use in 1945 following the establishment of the United Nations Organisations which recognised the need to give a consultative role to organisations which were not classified as either government or member states (Willett, 2002). In those early days, NGOs were usually referred to as international NGOs which act within the UN context. Now the range of NGOs have been so much extended to regional, national and local bodies engaging in activities of public interest and the Economic and Social Council (ECOSOC) of the UN now recognises national, regional, as well as international organisations as worthy of consultative status (Park, 2002; Martens et al, 2002).

Most international and local NGOs work closely with communities, especially disadvantaged communities, because that is where they see the most need for their

assistance. The institutional and financial capacity of African governments cannot serve the most difficult to reach areas of their countries. As a consequence, NGOs have often established their programme in those parts of the country where government cannot or will not supply services due to scarce resources.

NGOs emerged in Africa, particularly in the 1980s when international financial institutions, donor agencies and Western governments shifted some of their aid from African governments to civil society (Molomo and Somolekae, 1999).

### **2.3 The Growth of NGOs in Ghana**

Ghana has a long history of indigenous voluntary activities. Rural mobilisation efforts existed during the colonial period; however traditional forms of associations and groups date back to the pre-colonial period. Such traditional associations and groups were grouped into institutions indigenous to Ghanaian society and culture and included community-based organisations which existed mainly for mutual aid or self-help (Atingui, 1997). In southern Ghana, particularly in Akan-speaking farming areas, the famous ‘*Nnobia*’ system has been in active operation to the present period. ‘*Nnobia*’ is a traditional system of farmer association with groups of three to ten farmers gathering together and helping each other on rotational basis to cultivate their respective farms. Among the Dagaaba this practice is also referred to as ‘*nooriyeni*’. The distinctive feature about ‘*Nnobia*’ is that, though several men and women gather to help a particular farmer in a particular village to develop his or her land, the farm is not collectively owned but remains the property of the individual (Katsriku, 1996). In some traditional farming communities in Ghana ‘*nnobia*’ was one of the self-help actions where groups of people worked together to solve common problems (Amanor et al, 1993).



Village and town associations were also charged with the responsibility of overseeing the communities' social amenities including sanitation facilities, roads, footpaths and water bodies (wells and rivers) (Amanor et al, 1993). Mobilising financial and human support from men and women for developmental initiatives has a long traditional heritage. New and rehabilitated projects such as clinics, schools, markets, water supply, etc. have been undertaken by collecting money and materials and employing community resources of labour and management (Dennis and Peprah, 1996).

NGOs in Ghana include indigenous community based organisations, government-sponsored community development organisations, religious organisations, international development and relief organisations, professional and business associations, local craft unions, market women organisations, migrant groups and village associations (Atingui 1997). The Ministry of Employment and Social Welfare is officially responsible for registering all NGOs in Ghana. They must register with the Department of Social Welfare to be officially recognised. According to statistics from the Department of Social Welfare, 4,463 NGOs were registered in Ghana by the year 2009 (Ministry of Employment and Social Welfare, 2009). An increasing number of new NGOs are registered every year in this rapidly developing sector. NGOs in Ghana provide various services in diverse fields including: water development, education, health, agriculture, vocational skills, sanitation, environmental protection, food security, human resource development and research and recently, services for women, the elderly and children and capacity building (Ministry of Employment and Social Welfare, 2009).

## 2.4 The concept of Non-Governmental Organisation

Defining terms in an academic field can be difficult, and there may not always be agreement among scholars and specialists. The term NGO, which is understood and used in different ways in different places and times, has been considered very difficult to define and agree on. One of the reasons for this difficulty is that there are many similar terms used for the same thing or the same thing with slightly different connotations. Some of the key words used in the definition of NGOs in some literature are: major group; pressure group; interest group; private voluntary organisation; independent voluntary sector; third sector organisation; grassroots organisation; activist organisation; non-profit body; professional, voluntary, and citizens organisation (Martens, 2002). Notwithstanding the problems in defining the term, some scholars have been able to give it a definition. In the West for instance, NGO refers to organisations working on development in non-industrialized countries (Lewis, 1999).

Willems (cited in Kabanda, 2005) describes NGOs as non-commercial, and therefore should have a non-profit making aim, and non-political organisation that should not openly engage in violence or advocate violence as a political tactic and that they should be able to raise funds from their members or through voluntary contributions.

Martens (2002) defines NGOs as formal (professionalised) independent societal organisations whose primary aim is to promote common goals at the national or the international level. According to Turner and Hulme (1997) “NGOs are generally registered organisations, community groups, professional associations, trade unions, co-operate charity organisations whose aim is to improve the well-being of their members and of those areas in which they exists”. Non-governmental organisations (NGOs) are



generally considered to be “non-state, non-profit orientated groups who pursue purposes of public interest”, excluding the private sector (Schmidt and Take, 1997). The World Bank (1995:25), on the other hand, defines NGOs as private organisations that pursue activities to relieve suffering, promote the interests of the poor, protect the environment, provide basic social services, and or undertake community development. NGOs are private, voluntary, non-profit organisation with altruistic and philanthropic motives which promote socio-economic development especially at the grassroots (Raffer and Singer, 1996).

Since the term NGO is broad and ambiguous as indicated above, it covers a range of organisations within civil society, from political action groups to sports clubs. Its clear definition still remains contested. For organisations to be recognised as NGOs or not-for-profit organisations, they should satisfy the following criteria:

First, an NGO should be privately set up and sufficiently autonomous in its activity, that is independent from direct governmental control. Secondly, an NGO should also be non-profit, which would clearly define its voluntary character. Thirdly, it cannot be considered a political party with an aim of attaining political power. Fourthly, an NGO should support development which demonstrates its public interest character (Schiavo-Campo et al, 2001).

These characteristics were chosen not because they are in general usage but because, they match the conditions for recognition by Article 71 of the UN Charter on NGOs. Therefore, the World Bank definition of NGOs will be used for this research.

## 2.5 Characteristics of NGOs

There is a wide range of diversity of NGOs in terms of scale, size and money, their fields of action, their ways of activities, their structural forms and their target beneficiaries. These things affect how far they meet various needs of different people in different situations. NGOs do not seek profit. This distinguishes NGOs from other non-state entities such as multinational companies (Bidet, 2002). They have money making programmes like fund-raising, publications or rather small scale business-like programmes but the money they make is used for staff or other managerial costs. This non-profit value attracts not only government to cooperate with them but also the general public to be their supporters. People voluntarily devote their time and money to the common ideals. Volunteerism is what NGOs are based on. It carries two meanings. One is willingness without being forced and the other is sacrifice without expecting direct material return. Volunteerism is related to the attributes, 'informality' and 'amateurism' which are the hallmark of most NGOs. In comparison with government sector organisations and many private sector organisations they tend to be less bureaucratic and more informal (Edwards et al., 1995).

NGOs are said to be more flexible and innovative in their activities. They are quick to find out the needs of people, recognise injustice and respond to tackle those issues. NGOs in different fields of action may build temporary coalitions for addressing bigger problems or issues which affect the general public and dissolve the coalition once the goal is achieved. NGOs are sometimes more willing to address issues which require long-term investment. Those issues are often left without being taken care of by official agencies because they are keen to have visible results within a certain time frame. Innovativeness and willingness

to invest in long-term projects without prompt results are possible because of an open attitude to learn from experiences (Edwards et al., 1995).

Finally and most importantly, NGOs have a strong commitment to social change whether it is explicit or not. Some suggest that a recent tendency of some NGOs to adopt micro-finance credit as their main activities encouraged by donors could exclude helping poor people to be aware of and confront structural inequalities (Hulme et al., 1997). These characteristics draw a clear line between NGOs and other agencies (state agencies and market agencies). Given the fact that NGOs and government may share the same objective of welfare of their people, and that NGOs are increasingly expected to act like market agencies with high standards of accountability and effectiveness, this is perhaps the most distinctive feature of NGOs (Martens, 2002).

## **2.6 Categories of Non-Governmental Organisations**

Research on NGOs is vast, and NGOs have been subject to rich academic debates related to global governance, democratisation and development. Diversity has become a trademark of NGO and it is nearly an impossible task to enumerate the various NGO characteristics when it comes to their aims, strategies, resources, target groups, tools, effectiveness, impact and sustainability. Since NGOs are not homogenous actors as indicated previously, it is very difficult to classify them. Therefore, different authors have come out with various classifications of NGOs. Some of these classifications have been highlighted here. Although the NGO sector has grown in scope and operation the principles of altruism and voluntarism remain key defining characteristics (World Bank, 1995).

Clark (1991) has divided NGOs into six main categories:

1. Relief and welfare agencies such as the Catholic Relief Services and missionary societies just to mention but a few have been delivering relief services to people during disasters.
2. Technical innovation organisations, for example, the Intermediate Technology Development Group and the Grameen Bank of Bangladesh.
3. Public service contractors, for example NGOs which receive their funds from Northern governments (industrialized countries), work closely with Southern government (low income countries) their officials and agencies like CARE International.
4. Popular development agencies, for example, Northern NGOs and their Southern intermediary counterparts whose focus is on self-help, social development and grassroots democracy, for example OXFAM.
5. Grassroots development organisation, for example, locally-based Southern NGOs (constituting mainly the poor and the oppressed themselves), which attempt to shape a popular development process.
6. Advocacy groups without field projects but which exist primarily for education and lobbying, for example Freedom from Debt Coalition in the Philippines.

## **2.7 The Role of NGOs in Development**

No discussion on poverty, equality or development today is complete without considering the role of NGOs. Whether in the North or the South, NGOs are a visible, respected and entrenched part of many societies. NGOs like CARE International, OXFAM and the activities of Amnesty International and the World Wildlife Fund are regularly covered by media organisations across the globe (Michael, 2002). This therefore indicates that NGOs

have contributed to the development of communities around the world and are important partners of many governments, while remaining independent from governments. According to UNDP Human Development Report (2002), there were over 37,000 NGOs in the world, a growth of 19.3% from 1990. Their purposes differ but overall two categories dominate: economic development and infrastructure and research. NGOs role in development can be identified in the following ways;

### **2.7.1 Poverty Alleviation**

Due to the inability of governments around the world to alleviate poverty among their citizenry with all the poverty reduction strategies, NGOs have stepped in with various programmes aimed at reducing poverty in the world. Some of these programmes are aimed at both men and women in society. But due to the vulnerable nature of women and the fact that most of them are unemployed and also depend on their husbands for assistance, some NGOs have directed their efforts towards women groups. This is because while poverty affects men and women, womens' experience of poverty is different and usually more severe because of "gender based forms of exclusion" (Heyez, 1992 cited in Bamberger et al., 1996). This is to empower them and therefore reduce the likelihood of any form of paternalism or the development of a dependency syndrome. These NGOs therefore offer loans, training in vocations, inputs and book keeping skills. In the year 1998, World Vision International (Ghana) through its Gender and Development Programme mobilised rural women in Nadowli District and assisted them to build their income generating capacity in order to increase access to basic services for themselves and their children (Kyei, 1998).



### 2.7.2 *Micro-Finance*

Poverty reduction has been a key objective of most development policies and programmes, including microfinance programmes (Hulme et al., 1996; United Nations, 1997; Copestake et al., 2005; Arun et al., 2006; Adjei et al., 2008). The targeting of such policies and programmes at poor people is, therefore, important in development practice (Zeller et al., 2002). In most developing countries, most commercial banks do not serve several categories of people; these people are usually the poor, women, rural inhabitants and uneducated who do not have collateral to access loans (Hulme et al., 1996). Microfinance has slowly developed to be a worldwide institution that has come to the aid of the extremely poor people who are dropping out of credit programmes of the big commercial banks after having failed to keep up with repayment instalments. One popular provider of microcredit loans are Non-governmental organizations (NGOs). More specifically, the NGOs are non-formal providers of microcredit loans. Micro-finance has been seen as an effective tool against poverty and hunger (BRAC, 2000). Sinapi Aba Trust (SAT) is the largest NGO providing microfinance services in Ghana and a partner of the Opportunity International Network. It reflects its mission to serve as a mustard seed through which opportunities for enterprise development and income generation are given to the economically disadvantaged in society, to transform their lives. The organisation serves as the bank for over 50,000 poor clients, offering credit, savings, insurance and holistic training services, with women constituting about 92% of the organisation's client base (SAT, 2007; Adjei et al., 2008). Products and services offered by the organisation include loans, savings deposits, client welfare (insurance) scheme and non-financial services including entrepreneurial skills.

### **2.7.3 Provision of Social Infrastructure**

In their role of complementing the state, NGOs act as agents of development. In this case as argued by Thomas (1992), NGOs fill the gaps left by governments. The state creates an enabling environment for the NGOs to operate efficiently and effectively. NGOs provide health care, education; water and sanitation facilities, economic opportunities and human rights advocacy to many communities in the developing world. The decentralisation of governments and scaling-back of social spending advocated by the international financial institutions such as the International Monetary Fund and large aid-donor organisations throughout the last two decades have created considerable space for NGOs, and made them key figures in the provision of social services. For instance, NGOs provided over half of Kenya's health care services. As NGOs have become increasingly involved in providing such services, they have also become critical in ensuring human security (Nathan, et al, 2002). The Danish International Development Agency (DANIDA) has, since 1994, provided 22 new health centres with nurses' quarters, and also rehabilitated 22 existing centres in the Upper West Region. Consequently, 84% of the region's population now has reasonable access to health facilities as compared to 50% in the early 90s (Daily Graphic, 1997).

### **2.7.4 Policy Making**

Najam (1999) categorises participation of NGOs in the policy process into four roles: monitor, advocate, innovator and service provider. NGO participation in policy processes could be through a coalition of multiple organisations or one single organisation. It could be institutionalised participation, which is formal and government-oriented, or non-institutionalised participation, which is informal and free from government influence. Institutionalised participation could include taking part in government organised meetings,



committee or public hearings, taking legal action, or implementing contracts with government. On the other hand non-institutionalised ways could be demonstrations, campaigns, petitions, making public statements, organising seminars or public hearings, monitoring, etc (Park 2002). Time, degree, roles and methods of participation vary according to location, visibility and strategy of NGOs and one NGO can have more than one way of policy process participation. Big international environmental organisations such as Greenpeace and Sierra Club have been successful in the agenda setting stage. They organise international campaigns and events, or participate in formal meetings. Agenda 21 formulated in the United Nations Conference on Environment and Development in 1992 is a clear example of institutionalised participation for the latter.

In the policy development phase there tends to be more institutionalised participation such as a public hearing or meeting organised by governments. NGOs recognise that when the policy process is about to be selected the best-fitted alternative which is institutionalised participation is often more effective than campaign or protest (Park, 2002). Examples of NGO activities against governmental policy implementation, which have an adverse impact on environment, abound in Korea. One of the most well-known incidents of NGO impact on policy implementation is the huge movement among NGOs and individuals against the Dong River Dam in South Korea. Initiated by local people, it grew into a national protest and succeeded in stopping government plans for building the dam (Najam, 1999).

#### ***2.7.5 Advocacy and Lobbying***

Some NGOs lobby powerful decision-makers to take account of the interests of poor and marginalised people. NGOs lobby for change at the local, national and global levels. For

example, they might lobby companies to provide better working conditions for their employees; governments (at national or local level) to set policies which favour the poor or to deliver on existing policies; the public to push for political change or to recognise their role in international markets; rich governments to drop the debt that poor countries owe them, or the UN to intervene in new conflict situations. All these lobbying activities are based on NGOs' experience of working with poor people and on research they carry out. In addition, some international NGOs try to educate the public in rich countries about the realities that poor people in other countries face. NGOs are therefore able to represent the interests of the people they work with and in this case can ensure that policies are adaptable to real life situations.

Also, NGOs can oppose the state. They can do this by acting as watchdogs and holding the state accountable. This can be achieved through several methods including lobbying or even overly supporting groups which are adversely affected by the policies of the government (Thomas, 1992). An example is the Survival International (SI) which is an international NGO based in the United Kingdom that supported the Basarwa in Botswana in their refusal to relocate from the Central Kgalagardi Game Reserve (Lekorwe et al., 2007).

In Ghana, for instance, a group of local NGOs called the Ghana Coalition of NGOs in Water and Sanitation (CONIWAS), supported by Water Aid in 2003, established a dialogue with the government to create a national water policy. The Mole Conference has now become an important annual event. The Ghana government has acknowledged the role that NGOs play in making, following and monitoring the national water and sanitation policies. Due to this, investment in rural water sector increased coverage from less than

8% in 1994, to 40% in 1998, and the MOLE series created the conditions for nationwide convergence on the Right to Water (Lane, 2005).

#### ***2.7.6 Social Service Provider***

NGOs have been delivering social services which governments are unable to do due to scarce resources. This function of NGOs can be found more in Western industrialised countries where NGOs work closely with their governments as partners or contractors. However this function as a social service provider is not confined only in Western countries. Some NGOs in developing countries or countries in transition receive funds from their governments or donors and perform as service providers. Even though NGOs have been providing services independently from government since their beginning, cooperation with government in providing direct services increasingly became more common during the last two decades. This is mainly due to the tendency of governments to encourage NGOs to engage in service provision more and more on behalf of governments for several reasons. In the late 1970s and early 1980s conservative governments in Britain, America and many other countries afterwards, reduced the role of government in direct service provision along with the privatisation of public sector (Hulme et al., 1997). This has not only ethical benefits but also financial ones. Since NGOs promote and utilise volunteerism, they can be more cost-effective than government. Increased government funding channelled through NGOs for the last two decades may not be the sole cause of NGO growth but is surely one of the main factors especially in Western industrialised countries (Hulme et al., 1997). The Global Water Initiative (GWI) is an NGO that seeks to support the sustainable and equitable delivery of potable water to vulnerable rural communities in the Upper West Region. They have invested a total of

432,454.10 Ghana cedis in collaboration with Howard G. Buffet Foundation and the Catholic Relief Service in the provision of water and sanitation (GNA, 2008).

## **2.8 NGOs and Water and Sanitation**

The impacts of NGO activities on water and sanitation cannot be over emphasized since the evidence are everywhere. These facilities provided have improved the standard of living of the rural poor.

### **2.8.1 Health**

Every day 4,000 children die from diseases caused by unsafe water and sanitation; mainly from diseases like diarrhoea, cholera and dysentery (GLAAS, 2010). They can however be easily prevented through water, sanitation and hygiene projects. The simple act of washing hands with soap and potable water coupled with hygiene education provided by NGOs has been able to reduce diarrhoea diseases by 40%. These projects have also prevented diseases caused by worms, and diseases like scabies and trachoma caused by having too little water [www.wateraid.org](http://www.wateraid.org), accessed on 2010-11-26 (). Proper drainage and soak pits next to wells reduce the breeding grounds of malaria-carrying mosquitoes, while the use of latrines decreases the risk of nocturnal insects and snake bites. Having water and better hygiene during pregnancy and childbirth mean that the chances of post natal infections are reduced and, in the long term, women's reproductive health improves (Nyamugasira W, 2005).

With healthier children and reduced concerns about collecting water, women also report less mental stress. Furthermore, without having to wake up in the middle of the night to

start the long search or queue for water, women have more sleep which improves both their health and productivity (United Nations, 2009).

Rural Education Volunteer and Social Development Programme (REVSODEP) since its establishment has provided communities with potable drinking water and sanitation facilities, helped in treating guinea worm patients and providing them sanitation and hygiene education. It provided the people of Jana a village in the Tamale Municipality with boreholes and toilet facilities. This has ameliorated the people especially women and children from walking long distances in search of drinking water. It has also reduced the spread of guinea worm diseases drastically. This community for the past years was under the infection of guinea worm disease due to lack of potable drinking water. They used to source their water from dams, rivers and streams, but now the people can boast of clean and potable drinking water from the boreholes. Again men are healthier and can carry out their farm activities and go about their normal business and children now go to school on time (REVSODEP, 1998).

### **2.8.2 Education**

When children spend hours each day helping their mothers collect water, there is often no time left for their education. This problem is exacerbated by water-related illnesses preventing children from going to school, inadequate funds for schooling (made worse by medical bills) and the lack of toilets in schools especially for girls. Furthermore, if relatives fall sick girls will often stay at home to care for them and so are even less likely to attend school than boys (WHO/UNICEF, JMP, 2008). Water, sanitation and hygiene projects have reversed all of these trends and enabled children to go to school more often and learn better in a cleaner, healthier environment. Fewer diseases and more water mean



that children are properly hydrated and are able to concentrate and study better. But it is not only children that benefit. Teachers are more likely to want to work in a school with better facilities. Increased education, particularly of girls, is accepted as a key means of breaking the cycle of poverty ([www.wateraid.org](http://www.wateraid.org), accessed on 2010-11-26).

With the support of UNICEF's \$1.4 million grant from the UK Department for International Development (DFID), Malawi implemented the Strategic School Sanitation Promotion. The project improved sanitation in 400 schools, reaching 381,000 children since 2003, and improved access to clean water in 158 schools. As a result of having hygienic private facilities - unlike the pit latrines or bushes that were used in the past, absenteeism decreased. Ninety-four percent of primary school aged girls were enrolled in school in 2006, compared to an average of 67% across the rest of the continent. (UNICEF, 2006)

### **2.8.3 Household income**

Without clean water and effective sanitation communities can be stuck in a spiral of poverty and disease. Illness prevents the sick and the people who care for them from working and earning money, while money spent on medical bills reduces limited funds even more. Rural communities often have to walk miles for clean water, drink polluted water or use their limited resources in buying water from vendors. According to the United Nations Water Report (2009) the poorest people from Dar es Salaam, Tanzania, spend an average of 10% of their income buying water from vendors at inflated prices. This implies they spend more on water. NGO activities around the world in providing potable water and sanitation facilities have helped reduced this burden on the meagre incomes of the rural poor ([www.wateraid.org](http://www.wateraid.org), accessed on 2010-11-26).



#### **2.8.4 Family Life**

Following successful projects in water and sanitation, families are able to spend more time together, lower stress levels and an increased ability to observe religious rites and customs. Women say they can look after their families better; they can cook meals more regularly and eat at regular times. Having a clean water source enables them to wash themselves, their children and their homes, utensils and clothes more regularly, leading to a healthier, happier living environment. Hygiene education and provision of latrines that enable the safe, hygienic disposal of human waste mean that their living environment is further enhanced. As water is vital to brick building, communities are often able to construct better buildings. They report improved status and self-esteem, and with pride in their environment and village and latrines, some reported no longer being ashamed to invite relatives and friends to visit ([www.wateraid.org](http://www.wateraid.org), accessed on 2010-11-26).

#### **2.8.5 Benefits to Women**

Many benefits of water, sanitation and hygiene projects particularly impact upon women. As the main collectors of water, improvement in the water situation impacts positively on their lives. Not only do they have more time and better health, but by helping to maintain the facility they gain a stronger position in the community and ultimately gain more respect. Women are involved in all stages of the work from the building through to managing the schemes. This has an impact on their roles, relative to men, in village and family structures. This includes their increased involvement in domestic, financial, decision-making and political decisions. Women are further spared from the humiliation of practicing open defecation, and without having to walk to isolated water points or to find private places to go to the toilet. They are also at less risk of sexual harassment and animal attacks (United Nations, 2009). In the Ejura-Sekyedumasi District of Ghana, World

Vision Ghana through the Ghana Rural Water Project (GRWP) supplied the District with two boreholes fitted with hand pumps, two public Ventilated Improved Pit (VIP) latrines and a urinal. The beneficiary community has since identified this water and sanitation project as having had a high level of community participation and gender integration. It has improved the education of girls, who accounted for 53% of primary school students in 2005, compared to 43% in 1995(Poku Sam, 2006).

The stated goals of most NGOs is therefore to enable the poor to take control of the decision making process which affect their life. The paramount issue is to provide major avenues for participation, enabling the poor to own the project and take control. They act as facilitates or catalyst of local development efforts (Drakek, 1978). NGOs may therefore be regarded as development partners interacting closely with local government, involved in micro development, thus becoming active participants in the development process.

## **CONCEPTUAL FRAMEWORK**

The conceptual framework for the study was adopted from WE Consult Lda (2009). This framework was constructed for UNICEF Mozambique in collaboration with the government of Netherland for the One Million Initiative Programme in 2009. This project is aimed at accelerating Mozambique's efforts at achieving the Millennium Development Goals (MDGs) with respect to drinking water and adequate sanitation and hygiene for families and school communities (WE Consult Lda, 2009).

This is being implemented in 18 districts of the province of Manica in Mozambique. The programme has a duration of seven years (2006 – 2013). The objective of this project is to provide one million rural dwellers with safe drinking water and one million people in rural

areas with adequate sanitation facilities. It is also to strengthen the technical and management capacities of the people for planning, coordinating and implementing programmes for water supply, sanitation and hygiene education. This framework as illustrated in figure 2.1 is in three parts inputs/activities, output/outcomes and impacts (WE Consult Lda, 2009).

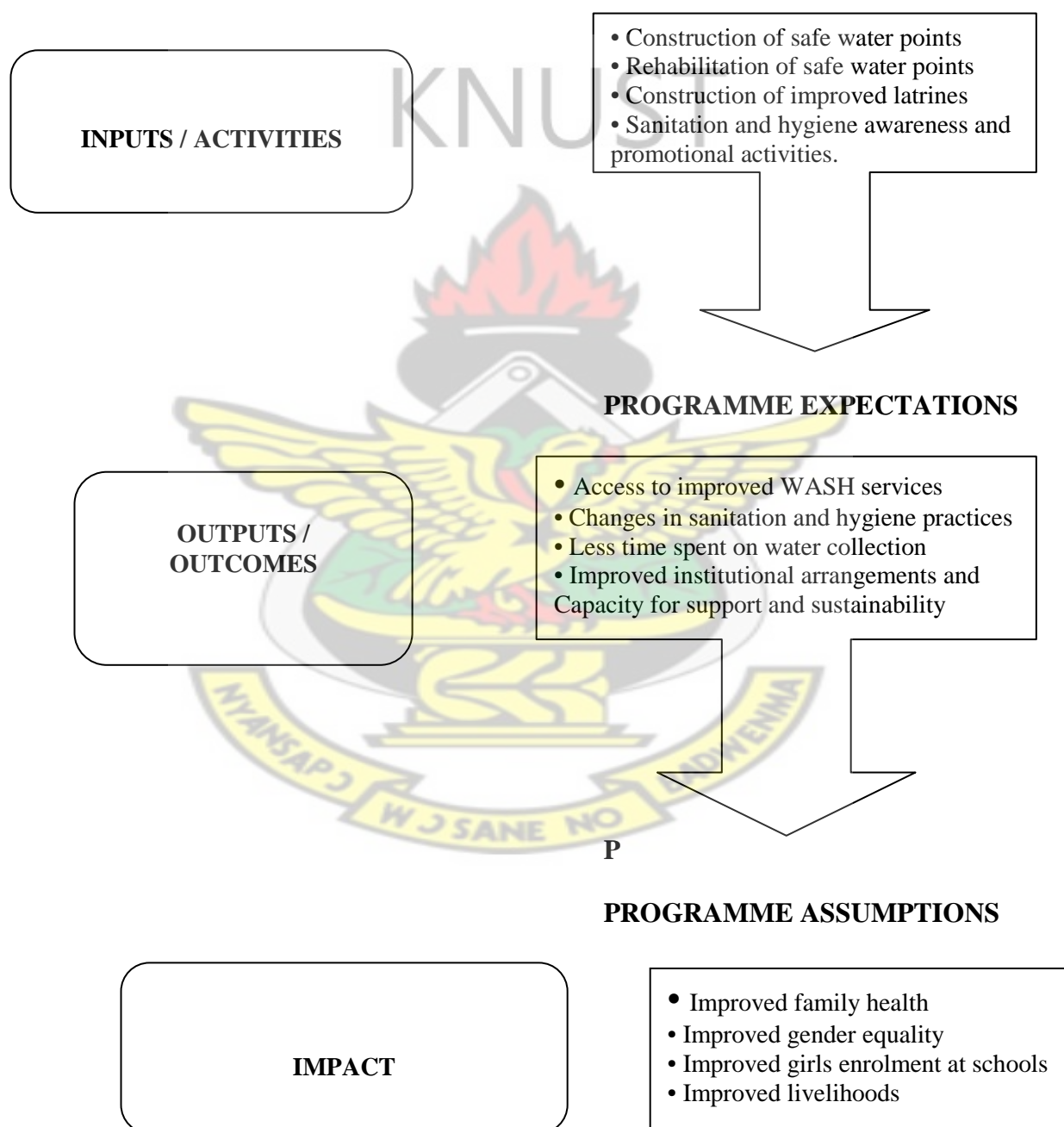
The first part inputs/activities include construction of safe water points, rehabilitation of safe water points, construction of improved latrines, sanitation and hygiene awareness and promotional activities. It is believed that when these water and sanitation facilities are constructed and old and dilapidated ones renovated and more importantly hygiene awareness created the water and sanitation situation will improve (WE Consult Lda, 2009).

The second part of the framework is outputs/outcomes. These expected outcomes include access to improved water, sanitation and hygiene (WASH) services; Changes in sanitation and hygiene practices; less time spent on water collection; improved institutional arrangements and capacity for support and sustainability. The implementation of the inputs will help improve the water and sanitation situation in Mozambique (WE Consult Lda, 2009). The expected impact of these interventions should lead to Improved family health, improved gender equality, improved girls enrolment at schools and improved livelihoods (WE Consult Lda, 2009).

The weakness of this model is that it does not indicate any source of financing and organisations involved in making its implementation a success. There is also a lack of linkages between the main themes of input, output and impact. On the basis of the

weaknesses cited, the frame has been modified to meet the requirements of this research. The duration for the implementation of this modified model is five years 2005-2010 and with three main themes.

**FIGURE 2.1     The WE Consult Lda Conceptual Framework for Water and Sanitation Delivery in Mozambique**



(Source: WE Consult Lda, 2009. The One Million Initiative Programme)

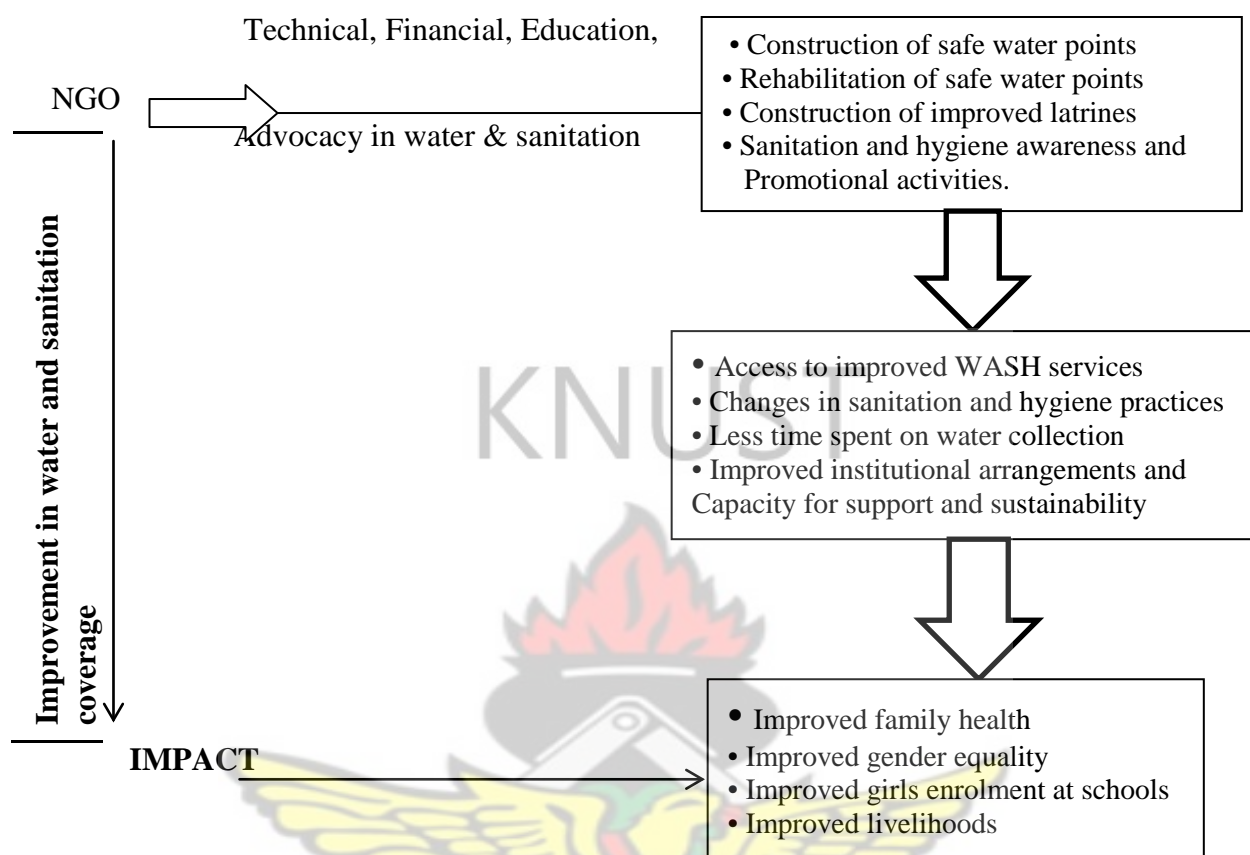
The modified model indicates linkages between the institutions responsible for the implementation of the policies and the overall impact of its implementation.

In the model, NGOs play roles in technical, financial, educational and advocacy on the water and sanitation situation in rural areas. Since government, due to its scarce resource base, cannot meet all the basic needs of the people, NGOs have stepped in to supplement the efforts of the central government. This role played by NGOs is evident in the numerous projects dotted around the country. For instances, CONIWAS (Coalition of NGOs in Water and Sanitation) in 2003 was able to advocate for an increase in government funds into water and sanitation in rural areas (Lane, 2005). The support given by NGOs has led to the construction and rehabilitation of safe water points and construction of improved toilet facilities for the people. They have also been able to link it up with hygiene awareness creation. This helps to maximise the full benefits of the water and sanitation facilities.

The maximisation of these benefits will lead to an improved access to Water, Sanitation and Hygiene (WASH) services, changes in sanitation and hygiene practices, less time spent on water collection, improved institutional arrangements and capacity for support and sustainability. This will go a long way to impact the livelihoods of the people, improve female enrolment in school and also promote gender equity. According to Water Aid (2009), impact of improved water and sanitation will lead to an improvement in general livelihoods in rural people. The District Assemblies and the Community Water and Sanitation Agency however, should give the NGOs full support and also monitor their activities effectively so that they would not be duplication of efforts in any particular area.



**FIGURE 2.2 Conceptual Framework for Studying NGO's Role in Water and Sanitation**



(SOURCE: Adopted and modified from WE Consult Lda, 2009. The One Million Initiative Programme)



## CHAPTER THREE

### 3.0 BACKGROUND OF THE STUDY AREA

#### 3.1 Introduction

This chapter examines the characteristics of the study area. It touches on the physical background which includes location and size, climate, vegetation, geology, and soils; socio-economic characteristics which includes population characteristics, density, age and sex distribution, dependency ratio, migration, ethnicity; settlement distribution which includes location and distribution of services and facilities; educational, health facilities and economic activities in the study area.

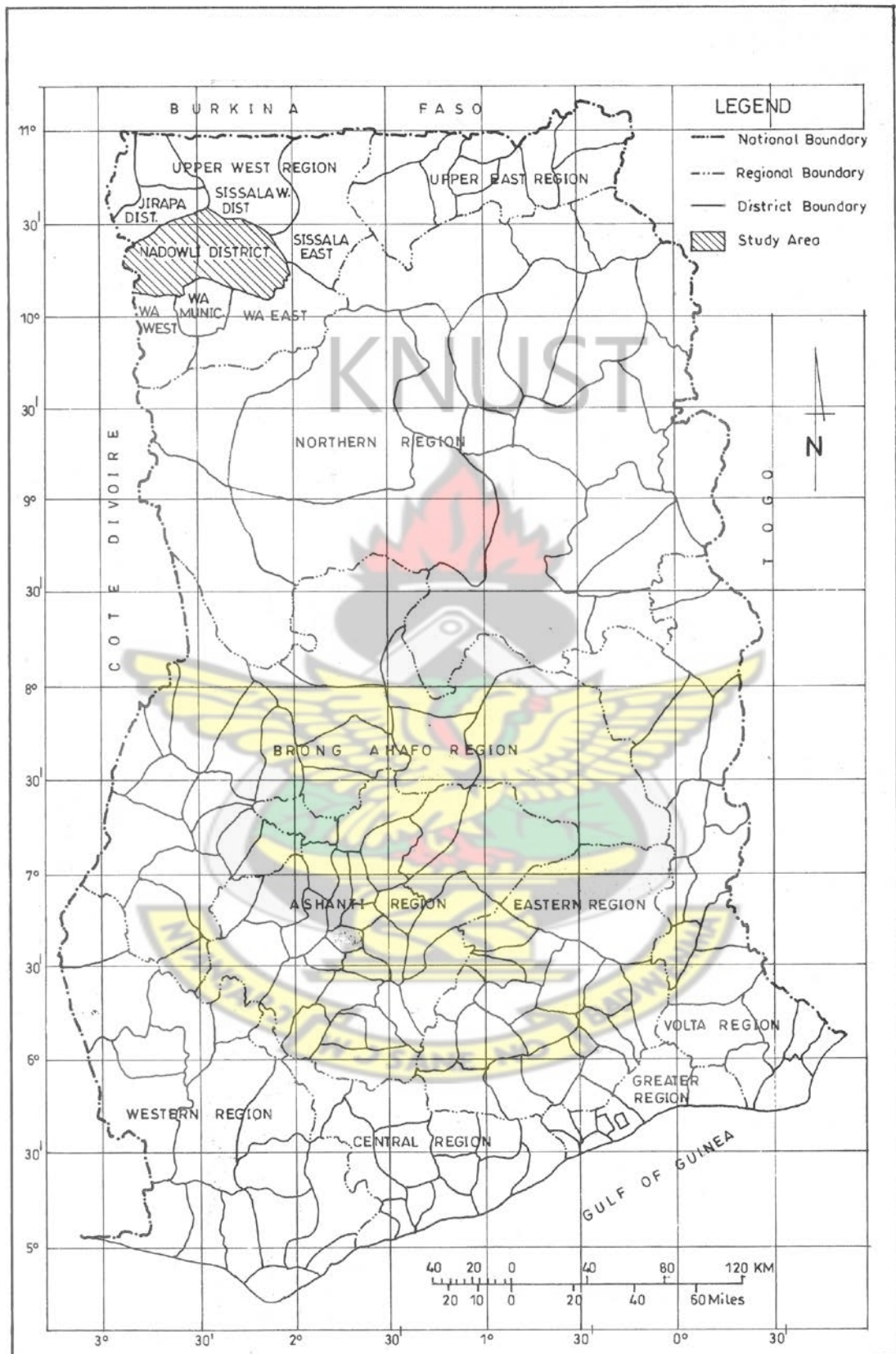
#### 3.2 Physical Background

##### 3.2.1 Location and Size

The Nadowli District is one of the nine districts in the Upper West Region of Ghana. It lies between latitude 11° 30' and 10° 20' north and longitude 3° 10' and 2° 10' west. It is bordered to the south by Wa District, west by Burkina Faso, north by Jirapa/Lambusie District and to the east by the Sissala District. Figure 3.1 shows the location of the Nadowli District.

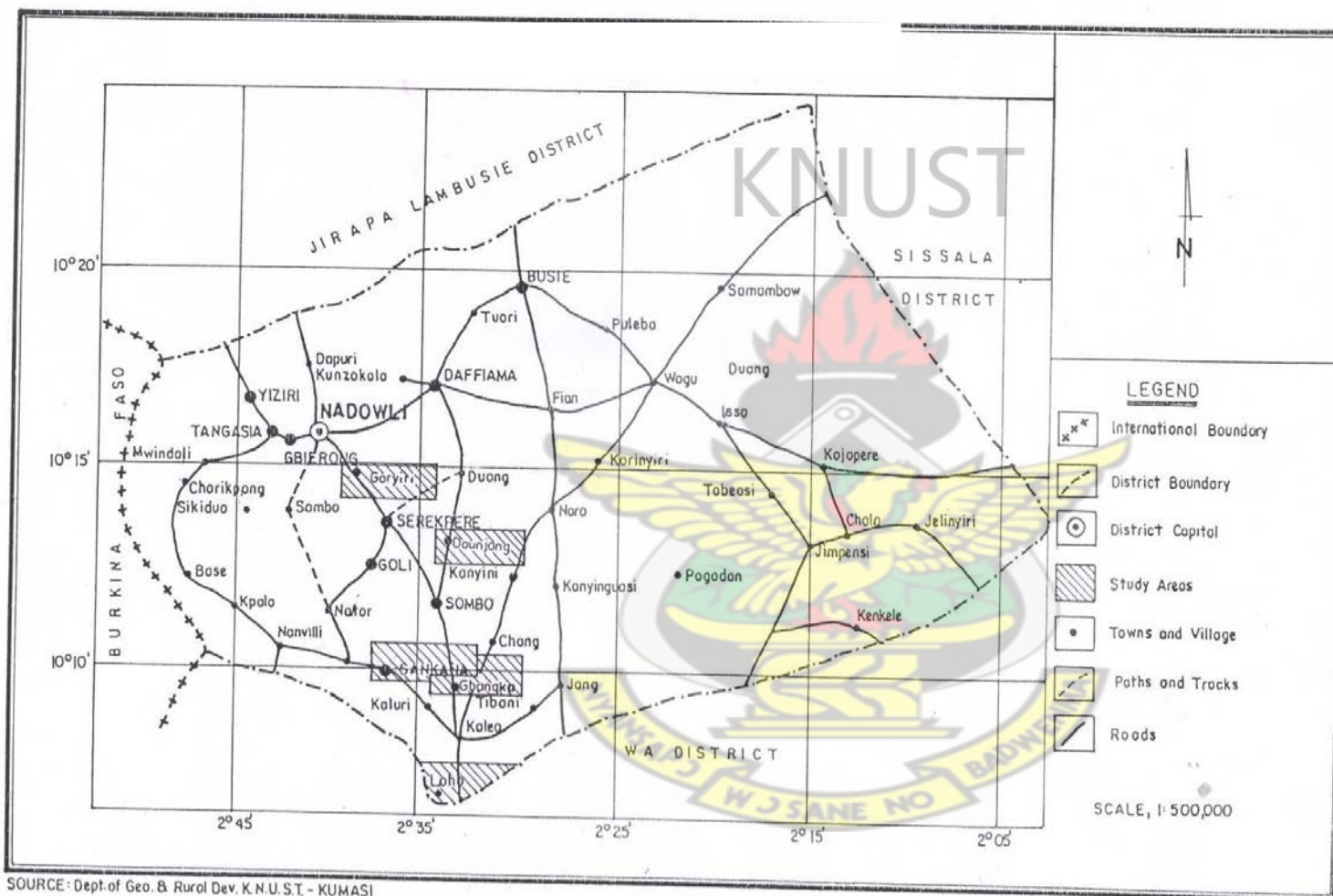
It covers a total land area of 2,742.50 square km and extends from the Billi Bridge (4km from Wa) to the Dapuri Bridge (almost 12km from Jirapa). This constitutes about 14.8% of the total land area of the Upper West Region of Ghana. The major towns in the district include Nadowli the capital town, Bussie, Norung, Takpo, Tabiesi, Fian, Duong, Sankana, Wogu, Daffiama, Sombo, Kojopere, Nator, Issa, Jang, Goli, Owlo, Nanvili and SeriKperee (Ministry of Local Government and Rural Development, 2006). Refer to figure 3.2 for map of the Nadowli District showing major features and study communities.

**FIGURE 3.1: Study Area in National Context**



SOURCE: Survey Dept. of Ghana (1994 Edition)

**FIGURE 3.2 Map of Nadowli District Showing Study Communities**



### 3.2.2 *Climate*

The climate of the District is one that is common to the three northern regions of Upper East, Northern and Upper West. There are two seasons, the dry and the wet. The wet or rainy season starts from May and ends in October followed by a prolonged dry season from November to April. The District has a mean annual temperature of 32°C and a mean monthly temperature ranging between 36°C in March to 27°C in August (Dickson and Benneh, 1984). The temperature of the District is between a low of 15°C at night during the Harmattan season and a high of 40°C in the day during the dry hot season. The District lies within the Tropical Continental Zone and annual rainfall is confined to 6 months and is also unevenly distributed. Mean annual rainfall is about 1100mm with its peak in August. Between October and April there is virtually no rain and this long dry season is made harsh by the dry north-easterly Harmattan winds (Dickson and Benneh, 1984).

### 3.2.3 *Vegetation*

Nadowli District lies within the Tropical Continental or Guinea Savannah Woodland vegetation characterised by shrubs and grassland with scattered medium sized trees. Some economic trees found in the District are Kapok, Shea, Baobab, Mango, Neem and Dawadawa. These trees are resistant to fire and drought. Grasses grow in tussocks and can reach a height of three metres or more. There is a marked change in the plant life of this vegetation zone during different seasons of the year. In the wet season the area looks green with life. Trees blossom and grasses shoot up rapidly. But soon after the rains, leaves begin to change colour from green to yellow and the trees shed their leaves. The heterogeneous collection of trees provides all domestic requirements for fuel wood and charcoal, construction of houses, cattle kraals and fencing of gardens. The shorter shrubs and grass provide fodder for livestock (Dickson and Benneh, 1984).



### **3.2.4 Geology**

Three main types of rock underlie the Nadowli District. These are Birrimian and Granite to the west and some parts of the east and Basement Complex to the east. The Birrimian rock formation is known to have traces of gold, which needs further investigation to establish its feasibility for exploitation. These rocks also hold a considerable quantity of water, which can readily be made available for use by drilling of boreholes and sinking of wells (Dickson and Benneh, 1970).

### **3.2.5 Soils**

The soil types identified in the Nadowli District are Laterite, Sandy and Sandy Loam (Savannah Ochrosols). They are generally poor in organic matter and nutrients as a result of the absence of a dense vegetative cover caused by bush burning, overgrazing, protracted erosion and poor farming practices. Relatively fertile soils (sandy loams) occur to the east of the District around Issa and Tabiesi and support crops such as yams, cereals, legumes and rice. On the other hand, soils in the west are generally poor and support limited agricultural activity. In colour, the soils here range from the combinations of yellow and brown to yellow and grey (Dickson and Benneh, 1984). This situation is responsible for the seasonal migration from the west to east for farming purposes and partly responsible for the skewed distribution of socio economic activities (Ministry of Local Government and Rural Development, 2006).

### **3.3 Socio-Economic Characteristics**

#### **3.3.1 Population Characteristics**

The 2000 Population and Housing Census put the population of the district at 82,716, with a growth rate of 1.5 % per annum, which is below the regional and national growth rates of 2.3% and 2.7 % respectively. The population is expected to increase to about 95,124 per 2010 projection at a growth rate of 1.5% in the district (Ghana Statistical Service, 2000, Ministry of local Government and Rural Development, 2006).

#### **3.3.2 Population Density**

The population density in the Nadowli District is about 31.0 persons per square kilometre but this is not evenly distributed. For instance, whereas areas around Nadowli and Kaleo have densities of about 50 persons per square kilometre, the eastern part of the District has a density of about 15 persons per square kilometre. This uneven population concentration is due to the over concentration of socio-economic infrastructure facilities and services in the western portion of the District as against areas in the east (Ministry of Local Government and Rural Development, 2006).

#### **3.3.3 Age-Sex Distribution**

The age-sex structure of the District is typical of the rural Ghanaian situation. The population pyramid has a broad base and tips to the top. About 45% of the population is between the ages of 0-14 years while 49% of the population between the ages 15 -60 years, constitutes the economically active population, the remaining 6% of the population above 65 years, being the aged (Ministry of local Government and Rural Development,



2006). The high proportion of children in the District gives an indication of the need to provide child care facilities such as day care centres, primary schools, clinics and the like.

**Table 3.1: Age Distribution of the Nadowli District**

Age (Years)	Population as of 2000	2010 Projection
0-14	37222	42805
15-64	40531	46610
65+	4963	5707
TOTAL	82716	95122

**Source: GSS, 2000 Population and Housing Census.**

The population according to the 2000 Population and Housing Census is also made up of 39,375 males and 43,341 females giving a male / female ratio of 80:100 as compared with the national male/female ratio of 97.9:100. The predominance of women calls for policies to address women's problems in the District. This is more imperative in view of the fact that though women especially those in the deprived areas are a vulnerable group their productive abilities cannot be underestimated (Ministry of local Government and Rural Development, 2006).

**Table 3.2: Sex Distribution of the Nadowli District**

Year	Male	Female	Total Population	Growth Rate
2000	39379	43341	82716	1.5%
2010 projection	45285	49842	95127	1.5%

**Source: GSS, 2000 Population and Housing Census.**

### **3.3.4 Dependency Ratio**

The Nadowli District has an age dependency ratio of 1:1 .04 meaning that if all the people in the labour force were working, 100 workers would have 104 dependants. However, since only 96% of the labour force is working, the economic dependency ratio of the

District stands at 1: 1.12 meaning that 100 workers have 112 dependants compared with the national ratio of 1:0.871 (Ghana Statistical Service, 2000). This implies that more people within the working class are not employed and this has increased the number of dependants from 104 to 112. This is less than the national figures of 100 people with 87.1 dependants (Ghana Statistical Service, 2000).

### **3.4 Settlement Distribution**

By population characteristics, no settlement in the Nadowli District is urban (an urban area in Ghana is defined as an area with a population of 5000 or more), implying that the District is a typical rural area. In terms of distribution, the population is concentrated in the western part of the District. Therefore, most of the major settlements are also concentrated around this portion with the high-density areas around the capital Nadowli.

The uneven distribution of the population within the District is due to the over concentration of social and economic infrastructure in the western portion of the District to the neglect of other areas, although the eastern portion has more fertile soils than the west. Thus, the formulation of policies that will ensure equity in the distribution of resources needs to be vigorously pursued (Ministry of local Government and Rural Development, 2006).

### **3.5 Condition of the Built Environment**

There is gradual improvement in the housing sector in the Nadowli District. Most of the traditional house types with earthen structures and thatch roofs are giving way to land crate and blockhouses with zinc and aluminium roofing sheets. There has also been remarkable improvement in the quality, quantity and design of privately owned houses.

This has positive implications on the health of the people since it will minimize the spread of diseases including tuberculosis and other air borne diseases which are on the ascendancy in the District.

Several staff buildings in the District especially for the education and health sectors have been rehabilitated. The District Assembly has also improved its housing stock by building twelve (12) units' 2-bedroom houses and 5 units' 3-bedroom houses in Nadowli, the District capital. The Social Security and National Insurance Trust (SSNIT) has also built ten (10) units 2-bedroom houses in Nadowli that provide suitable accommodation for departmental staff and a few indigenous people (Ministry of local Government and Rural Development, 2006).

### **3.6 Location and Distribution of Services and Facilities**

The distribution of services and facilities in the District are inadequate and also skewed towards Nadowli the District capital and other major settlements in the District such as Kaleo, Issa, Daffiama, Sankana and Nator. Since most of the major settlements are also located in the western part of the District and have attracted better socio-economic infrastructure, it is therefore not surprising that it has the highest social and economic interaction. The above situation is one of the major factors that have influenced the existing spatial pattern of the District's development (Nadowli District Water and Sanitation Plan, 2009-2013).

### **3.7 Educational Facilities**

There has been a general improvement in the educational sector between the periods of 2006 - 2009. This improvement can be seen in physical infrastructure development at the pre-school level (Day Nursery) as well as enrolment at the Primary level. Currently, more

than 65% of the district's population has access to primary education within a distance of 4-5km (Nadowli District Directorate, GES, 2009). This achievement is through the collaborative efforts of Ghana Education Service and NGOs such as Catholic Relief Services operating in the education sector. The district has a total of 187 educational institutions comprising sixty-two (62) day nurseries, seventy-eight (78) primary, forty (40) junior high schools, five (5) technical/ vocational and three (3) senior high secondary schools. A number of NGOs have played and continue to play various roles in the development of educational infrastructure in the District. Nevertheless, there is still much to be done in view of the increasing demand for basic education. Some of the schools seriously lack furniture as children sit on stools and stones in class. Twenty two (22) primary schools need pre-school facilities since it is the goal of the nation to integrate early childhood development centres into formal education system (Nadowli District Directorate, GES, 2009).

**Table 3.3: Types of Educational Institutions in Nadowli District**

Institution	Number	
	2006	2009
Day Nursery	20	62
Primary	69	78
JSS	40	40
Technical /Vocational	4	4
SSS	3	3
Total	136	187

**Source: District Directorate, GES, Nadowli (2009).**

### **3.8 Water and Sanitation situation in the Nadowli District**

The Nadowli District is currently served by small towns and rural water systems, which are owned and managed by communities through their water boards. The facilities include the pipe system, boreholes and hand dug wells. While most of the facilities are publicly owned others are private. Presently, most hand dug wells are low yielding and not capable of providing water all year round and have since dried up. In view of this the District is now relying heavily on the pipe system and boreholes as the reliable sources of water supply for the communities. Apart from the District Assembly, the CWSA and ProNet are into helping the Assembly provide these facilities to the rural communities and small towns. The core function of the Assembly basically deals with planning for human resource development, infrastructure and poverty reduction.

#### **3.8.1 Water Facilities**

##### **3.8.1.1 Pipe systems**

There are 8 pipe systems in the District located in 8 communities, six (6) are private, belonging to health and religious institutions whilst two (2) are public managed by communities.

##### **3.8.1.2 Boreholes with pumps**

There are 240 boreholes located in 168 communities, out of these, 119 are functional and 121 need rehabilitation. However 53 of the boreholes are privately owned by the Catholic Church and private hospitals among others. Compared to the number of boreholes at the beginning of 2000, the construction of new boreholes has increased by more than 30%. This achievement has had no impact on the water supply coverage in the District in view



of the increased number of broken down boreholes and others that require rehabilitation (District Water and Sanitation Programme, Nadowli 2009).

The calculated coverage or number of people served by functional facilities is about 59,825 people representing 67.1% of the total estimated population have access to potable water. The formula used for the calculation of the water coverage simply divides the population of the District by the number of existing boreholes and wells taking into consideration the standard number of people they serve. However this system falls short of addressing the distances people cover before they access water from their houses, the time they wait to draw some quantity of water, the ownership of the facilities (whether community or private) and even the spatial distribution of community boreholes.

With the advent of Community-Based Rural Development Project, it is envisaged that most communities which have no access to potable water sources will have the opportunity to access funds to enable them get boreholes and other water systems to increase the percentage coverage in the District. Poverty is the major hindrance to the expansion of water supply to most communities in the District. Another hindrance is the delays in the release of funds by development patterns for the implementation of water projects.

### ***3.8.2 Sanitation facilities in the Nadowli District***

The existing sanitation facilities in the District are few and include household pit latrine, Kumasi Ventilated Improved Pit Latrine (KVIP) and water closets, which can only be found in institutions and privately owned houses. This has made most of the inhabitants in the district to resort to open defecation. Again, there has not been any major intervention by the government hence, the significant contributions made by the NGOs and CWSA



have not matched the huge demand, in spite of the fact that the institutions involved in the provision of sanitation facilities in the district, fall short in ensuring proper sanitation practices.

**Table 3.4: Available Sanitary Facilities in the Nadowli District**

Type of Facility	Total	Public	Private
Household Latrine	191	-	191
KVIP	82	82	-
Water Closet	Undetermined	-	-

**Source: District Water and Sanitation Report, 2009.**

The household pit latrines and water closets as indicated in table 3.4 are private while the KVIP is public. It is currently estimated that 11.1% of the current population have access to sanitation facilities. However due to improper management and maintenance most of the facilities have been neglected and people resort to open defecation which poses serious environmental and sanitation problems (Nadowli WASH Report, 2009).

In finding permanent solutions to the sanitation problems, the District Assembly is now emphasizing on household toilets and hygiene education to ensure a sense of ownership of facilities and their proper maintenance. The achievement of this objective will to a large extent, improve upon the current sanitation situation in the District (District Water and Sanitation Programme, Nadowli 2009).

### **3.9 Health**

The District Health Monitoring Team (DHMT) in collaboration with the Sub District Health Monitoring Teams (SDHMTs) implements and manages national and regional health policies in the District. To ensure participation and maximum use of resources, the District health administration collaborates with relevant stakeholders including the District Assembly and Non-Governmental Organisations in the delivery of services.

The District health sector can be categorised into 2, public and private. The Ghana Health Services runs the public sector providing both curative and preventive care in the District hospital, health centres and outreach stations. Community based disease surveillance volunteers have also been trained to assist in surveillance activities. Drug outlets form a large proportion of the private sector including chemical sellers and unlimited number of drug peddlers who are mostly semi illiterates but very good salesmen. These drug peddlers can be categorised into three; peddlers of herbal medicine, peddlers of bio-medicine moving from community to community and the neo herbalists who sell both herbal and modern drugs.

A very important group of practitioners in the health care system are the Traditional Birth Attendants. They have since 1978 formed part of the Primary Health Care (PHC) strategy in the District, providing reproductive health care services (Nadowli District Health Directorate, 2009).

### ***3.9.1 Health Facilities in the Nadowli District***

There has been a significant change in the number of health facilities in the District between the periods 2006 and 2009. Apart from the increased number of outreach stations, the number of facilities has more than doubled with the number of outreach points increasing from 132 to 148 during the same period. Currently, there are two hospitals, one government (District Hospital) and one private (Ahmadiyya Moslem Hospital) located in Nadowli and Kaleo respectively. Refer to table 3.5.

**Table 3.5: Spatial Distribution of Health Facilities**

Type of Facility	Location	Number
Nadowli District Hospital	Nadowli	1
Health Centre	Jang, Daffiama, Issa, Kaleo, Charikpong, Bussie Dapuri, Kojopere, Nadowli, Sombo, Nanvili, Takpo, Fian.	13
Community Clinic	Goli, Chari-Sombo, Norong, Nator, Kamahi, Challa, Duong Sankana	8
Ahmadiyya Moslem Hospital (Private)	Kaleo	1
Total		23

**Source; Nadowli District Health Directorate, 2009.**

The distribution of existing facilities is concentrated in the western half of the District. The eastern half has just two facilities, one at Issa and the other at Kojokpere. The average distance to a health facility in the District has reduced from 16km to about 9km. This is because more community clinics have been provided. This achievement still falls short of the national target of a 5 kilometre maximum distance in accessing health services. This is indicative of poor physical accessibility to health services notwithstanding the increased outreach stations and health facilities in the District. Many people are also unable to access health services due to the high incidence of poverty in the District.

The staffing situation in the health sector is a major challenge in the delivery of quality and accessible health services. They are only four doctors currently in the district comprising two expatriates and two nationals. The two expatriates are non-permanent who are often replaced on short durations. In view of this, the current doctor/patient ratio of 1: 18,387 is higher than the national figure of 1:13,000, a figure higher than the WHO global standard of 1:5,000(GNA, 2009). The Nadowli District and Ghana as a country have a lot to do in order to meet the World Health Organisation target. The nurse-patient ratio according to the health directorate of Nadowli currently stands at 1:1406. As a measure of closing the gap, the District Assembly has since the year 2000 been sponsoring student nurses who in turn will

serve the District after completion of their course. A number of capacity building trainings are occasionally organised in collaboration with development partners to improve the capacity of nurses in the delivery of health services (Nadowli District Health Directorate, 2009).

### **3.10 Economic Activities**

The economy of the District is dominated by subsistence agriculture and petty trading activities. About 55% of the active population is engaged in agriculture, with about 30% in the public sector and 15% in petty trading. Agriculture still remains the major economic activity in the District. It is centred on crops and livestock production. The crops are mainly grown by the farmers on subsistence basis which hardly last the next farming year. Crops grown include corn, millet, maize, cowpea and groundnut. Of these the District has comparative advantage in groundnuts and cowpea production. In animal rearing, goat and sheep are mostly reared. This is because the soil type in the District supports the growth of these crops and the vegetation also provides feed for the animals. As a rural economy, industrial activities are insignificant. However, small-scale agro-processing activities such as pito brewing, shea butter extraction, groundnut oil extraction and spinning of cotton are also undertaken especially among women. To a lesser extent, some residents also depend on other secondary economic activities such as construction, blacksmithing, weaving, dressmaking, hair-dressing and pottery to earn a living (Ministry of Local Government and Rural Development, 2006).

### 3.11 Conclusion

This chapter looked at the physical background of the Nadowli District, the socio-economic characteristics of the area, education, health and water and sanitation activities. From the information it can be deduced that the Nadowli Assembly is making progress towards achieving water, education and health coverage, but that of sanitation still lags behind although efforts are being made to achieve its coverage.

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## CHAPTER FOUR

### 4.0 THE EFFECTS OF PRONET'S ACTIVITIES IN THE NADOWLI DISTRICT

#### 4.1 Introduction

This chapter deals with the analysis of data and presentation of results. It focuses on the respondents' demographic characteristics and their coping strategies with the water and sanitation situation before and after the intervention of Pronet. It also discusses major themes like effects of the water and sanitation situation on the education, health and economic activities of the people.

#### 4.2 Socio-Demographic Characteristics of Respondents

The section discusses the social and demographic characteristics of the respondents. This includes their sex, age, education, economic activities and income levels. Table 4.1 indicates the sex and age distribution of respondents.

**Table 4.1: Sex and Age Distribution of Respondents**

Sex	Age						Total
	10-20	21-30	31-40	41-50	51-60	60+	
Male	2%	9%	14%	7%	2%	2%	37%
Female	6%	18%	15%	17%	3%	4%	63%
Total	8%	27%	29%	24%	5%	6%	100%

**SOURCE: Field Survey, May 2011**

The respondents for the study included both males and females in different age groups ranging from 10-60 or more years with various educational as well as occupational backgrounds. Age group 31-40 consisted of 29% of the respondents. This comprised farmers, pito brewers, shea butter processors, charcoal and fire wood sellers. This was followed by the age group of 21-30 years with 27%.

Also, majority of the respondents were females. The female dominance (63%) was due to the fact that they are responsible for getting their households water for domestic purposes.

The level of education of an individual influences his/her occupation, and without a good education; prospects for a good job with good earnings are slim. Table 4.2 shows the educational attainments of respondents

TABLE 4.2: Educational Level

EDUCATIONAL LEVEL	FREQUENCY	PERCENTAGE
None/No Formal Education	113	63
Primary	25	14
JHS/Middle School	33	18
Secondary/Technical/Commercial	9	5
<b>TOTAL</b>	<b>180</b>	<b>100</b>

SOURCE: Field Survey, May 2011.

Most of the respondents (63%) have not had any formal education whilst 18% have had junior high school education. Fourteen percent have had primary education and five percent had secondary/technical/commercial education. The details above indicates that majority of them are illiterates.

There is a positive relation between one's occupation and his or her level of income and table 4.3 relates the occupation to the income levels of the respondents.

**TABLE 4.3: Occupation and Monthly Income levels of Respondents**

		Occupation					
		Farmer%	Trader%	pito brewer%	Carpenter%	Teacher%	Charcoal burners%
Monthly Income	below 50	8	3	7	2	0	14
Levels (¢)	51-100	25	9	9	4	1	4
	101-150	4	0.5	0	0	0	1
	151-200	3	0.5	0	0	0	1
	201-250	1	0	0	0	0	0
Total		42	13	17	6	1	21
							100

**SOURCE: Field Survey, May 2011**

From table 4.3, 42% of respondents were farmers and only 1%, were teachers. It can also be deduced that majority of the respondents are involved in basically primary economic activities because their level of education is very low as indicated in table 4.2. This therefore has reflected in the income levels of the respondents. The Ghana living standards survey conducted in 2008 indicates that 55.8% of the working population is employed in agricultural activities (GSS, 2008).

Generally, income levels of respondents were low. The highest monthly income level ranged between Gh¢201-250 and the lowest below Gh¢50. Fifty-three percent earned between 51-100 Ghana cedis per month and 1% earned between GH¢201-250 a month. Thirty-five percent of them earned below GH¢50. Although, 35% of household income are from the sale of agricultural produce, rural farmers earn low income from the sale of their produce (GSS,2008). This could be explained by the nature of their economic activities and educational levels. It can be deduced that the respondents are low income earners. These low income levels with respect to occupation have been proven by a research conducted in New Zealand by Maani (2002) that there is a positive relationship between education and income levels. The study investigated the relationship between

educational qualifications and income levels over the period 1981 to 1996. The findings were that those with higher education (bachelor degrees) earned higher salaries than those with lower (school certificate) or no education. Those with higher education also had better working conditions than those with lower or no education.

Fifty-three percent of the total respondents earned between Gh¢51- 100 a month. This income makes it difficult for the people to meet all their daily needs.

### **4.3 Water and Sanitation Situation in the Study Communities before Pronet**

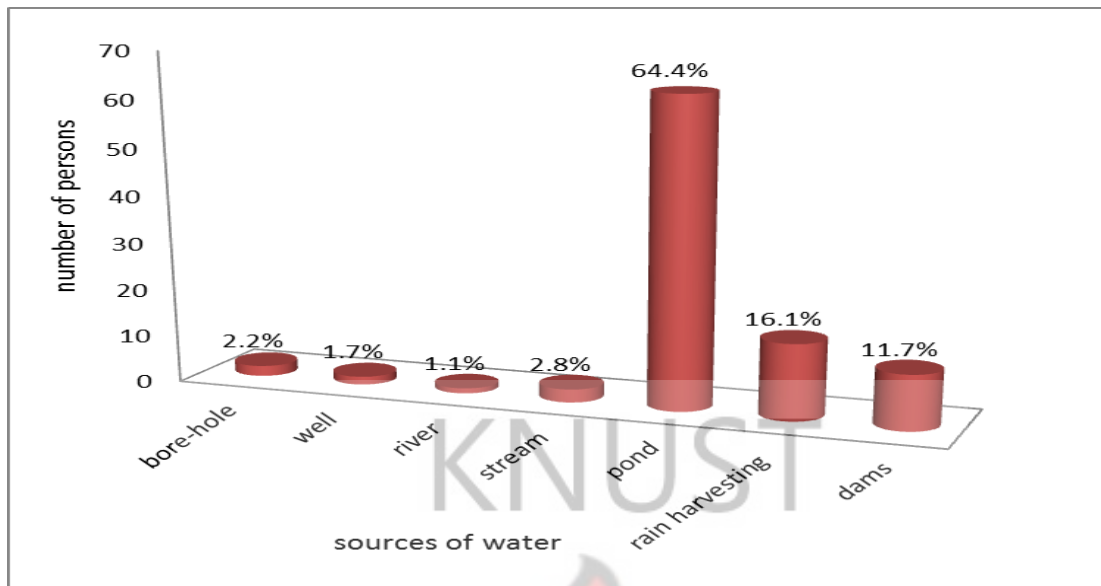
#### **Intervention**

The first part of this section discussed the demographic characteristics of the respondents with respect to their education and income level, sex and age distribution. This section discusses respondents' views on the water and sanitation situation before ProNet's intervention.

#### ***4.3.1 Sources of Water for Drinking and other Domestic Purposes***

Dirty water is undermining efforts to end extreme poverty and disease in the world's poorest countries. Figure 4.1 indicates the sources of water for drinking and other domestic purposes in the study communities before ProNet's intervention.

**Figure 4. 1: Sources of Domestic Water before ProNet's Intervention**



**SOURCE: Field survey, 2011.**

Out of the 180 respondents interviewed, 64.4% depended on ponds for their source of water for drinking and other household activities before ProNet's intervention. About 11.7% also depended on dams for their source of water for drinking and other domestic purposes. Only 2.2% of the respondents depended on a potable source of water which is the bore hole. This implies that majority of the people depended on non-potable sources for water. The ponds unfortunately dried up during the long dry season. The women had to travel long distances (about 2km) to other nearby villages for water. The other option was that they had to scoop the mud out of the pond as indicated in plate 4.1 and then wait for long hours to get some water. The 16.1% of the respondents who depended on rain harvesting did not get a constant supply of water through-out the year. This is due to the single maxima rainfall pattern experienced in northern Ghana (Dickson and Benneh, 1984). They therefore, resorted to the ponds during this period. This implies that about 81% of the respondents depended on ponds for water. One of the female respondents at Goriyiri during a focus group discussion on 10<sup>th</sup> May, 2011 remarked that;



*‘the teachers in the school were virtually operating a ‘clinic’ here because our children are always falling sick. They experienced stomach aches, diarrhoea and vomiting. The teachers had to be giving the children first aid in order to have them in school’.*

**PLATE 4.1: One of the abandoned Sources of water for Goriyiri before NGO intervention**



**SOURCE; Field Survey, May 2011.**

In the Loho community, they had 3 bore holes, but 2 produced hard water (hard water is water which does not lather easily with soap) and one produced soft water (soft water is water which lathers easily with soap). This therefore made it difficult for the people to get water during the rush hours of morning and evening because of the over concentration on the bore hole with soft water. The struggle for water led sometimes to quarrels among community members. About 11.7% of the respondents also depended on dams for water.

**Plate 4.2: Dam depended on by Sankana before ProNet intervention**

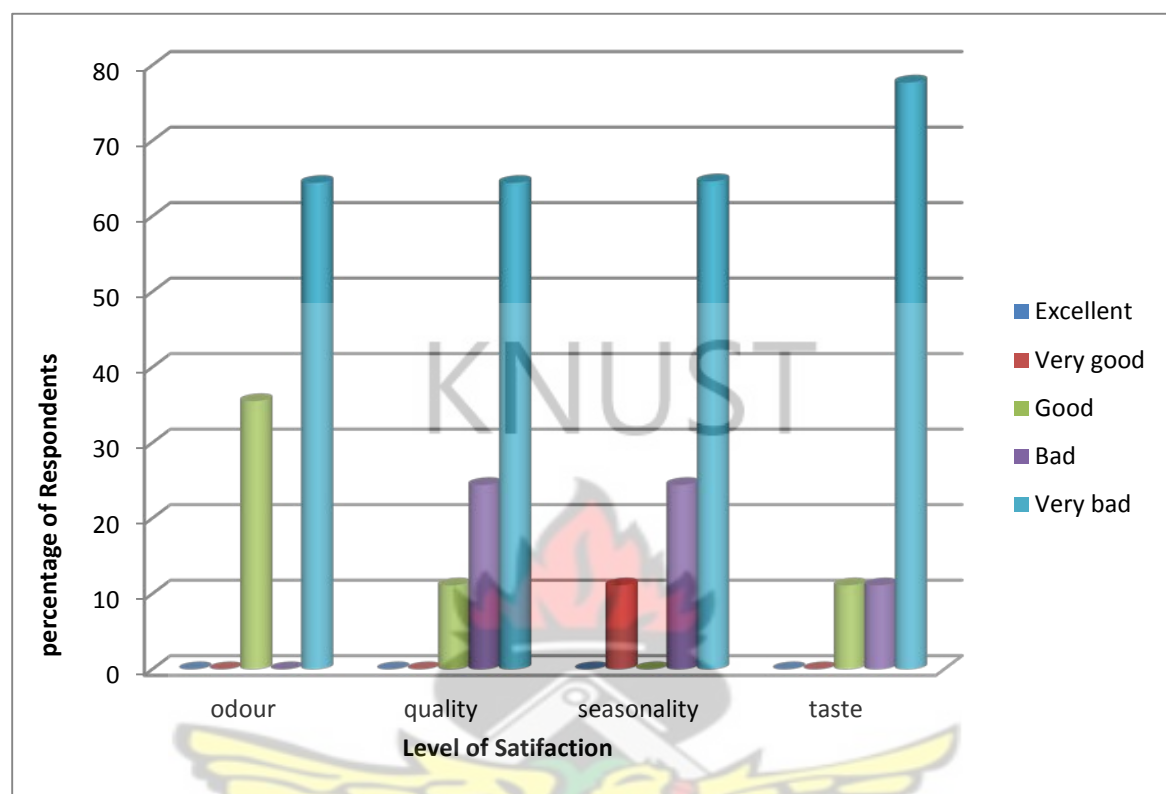


**Source; Field Survey, May 2011.**

Plate 4.2 shows a dam that served as a source of domestic water for the people of Sankana before ProNet intervention, but water from it is now used for other house-hold activities like washing and cleaning. These sources of water depended on by these communities are not peculiar to Ghana. The MDG goal 7c seeks to reduce by half, by 2015, the proportion of people who are unable to reach or afford safe drinking water and good sanitation especially in developing countries. This is because it is estimated that about 884 million and 2.4 billion people lack access to safe water and sanitation respectively (WHO/UNICEF, 2008). This means that most of the people especially in developing countries depend on unhygienic sources of water.

From the above discussions, majority of the respondents depended on non-potable sources, there was therefore the need to assess the quality of the water to ascertain its effects on the activities of the people and this has been captured in figure 4.2.

**Figure 4.2: Level of Satisfaction with Domestic Water Sources before ProNet Intervention**



**Source: Field Survey, May 2011**

In terms of the level of satisfaction of their water supply before ProNet's intervention, 11.1% (20) of the respondents indicated that the quality of the water was good. These were the people who depended on the dams, wells and the few who had access to the few bore holes around their homes. About 24.4% (44) said the quality was bad while 64.4% (116) indicated that the quality was very bad. This group of respondents had their water from the streams and ponds.

On the seasonality of flow of water from that source, 11.1% (20) said it was very good. This represented the group which said the quality of the water was good. About 24.4% (44) said the frequency of flow of the water was bad and 64.4% (116) said it was very bad. With regard to the odour of the water, 35.6% (64) were of the view that it was good, but

64.4% (116) respondents said the water had a very bad odour. This is because the water sometimes had some smell. In terms of the taste of the water, 11.1% (20) respondents said the water tasted good whilst 11.1% (20) indicated the water tasted bad. About 77.8% (140) said the water had a very bad taste. This implies that the water sources the people depended on were very poor

Since the people in the communities used so much time to fetch water from ponds, streams, rivers and other sources, it was necessary to estimate the number of hours used in fetching water. These hours could have been used for other activities to help the rural dwellers improve their livelihoods and income.

**Table 4.4: Time Taken To Fetch Water**

Time Taken	Frequency	Percentage
Less Than 30 Minutes	1	0.6
30 minutes- 1hour	20	11.1
1 hour and above	159	88.3
Total	180	100

**Source: Field Survey, May 2011.**

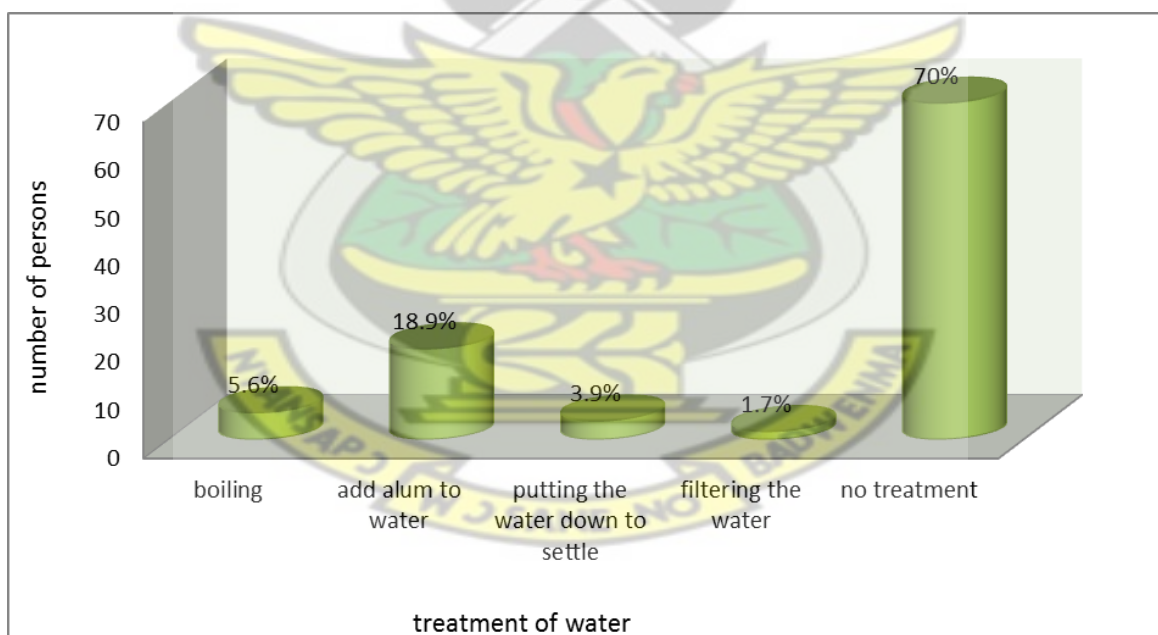
The time taken to fetch water from the water sources depended on the seasonality of flow and distance covered. It was therefore important to assess the impact of these indicators on the lives of the people. About 88.3% of the respondents used more than one hour to collect water. The time ranges from more than 1 hour to about 4 hours. From figure 4.2, it is indicated by respondents that the seasonality of flow was very poor. This therefore, tells why most of them spent more than 1 hour in accessing the water points. About 0.6% respondent used less than 30 minutes. The WHO/UNICEF JMP (2008) standard time for collecting water is between 3 - 30 minutes, and between 15 to 20 litres per person per day. It further indicates that households spending more than half an hour per round trip progressively collect less water, and eventually fail to meet their families' minimum daily



drinking-water needs. The time ranges indicated by respondents compared to the WHO/UNICEF standards indicates that about 90% of the respondents fall below the standard. This brings to light the difficulty that the people went through in accessing water before the intervention. It is therefore not surprising that during a focus group discussion, the women attributed their inability to brew pito and late cooking to the time spent in collecting water.

Most respondents were not satisfied with the quality of water they collected for domestic purposes. It therefore became necessary to find out if they treated the water before usage and which method they employed and this is captured in figure 4.3.

**Figure 4.3: Methods of Treatment of Water before Drinking**



**Source: Field Survey, 2011.**

From figure 4.3, 70% of the respondents did not treat the water in any way before usage. When asked the reason why the reason for not treating the water before drinking, they indicated that they did not see the need for that. Only 1.7% of the respondents filtered the



water before usage. The filtering cloth is spread to cover the mouth of the container in which the water is stored. When the water is being poured into it, it sieves the water of impurities, but it does not kill the germs in the water. About 18.9% of the respondents used alum to treat their water before usage. They said that the alum affected the taste of the water, but the water did not contain impurities. Boiling, which is the best and cheapest way to treat water that is unsafe because of the presence of protozoan parasites, bacteria or viruses was practiced by only 5.6% of the respondents. Those who boiled the water did this on the advise of health workers when they visited the hospital.

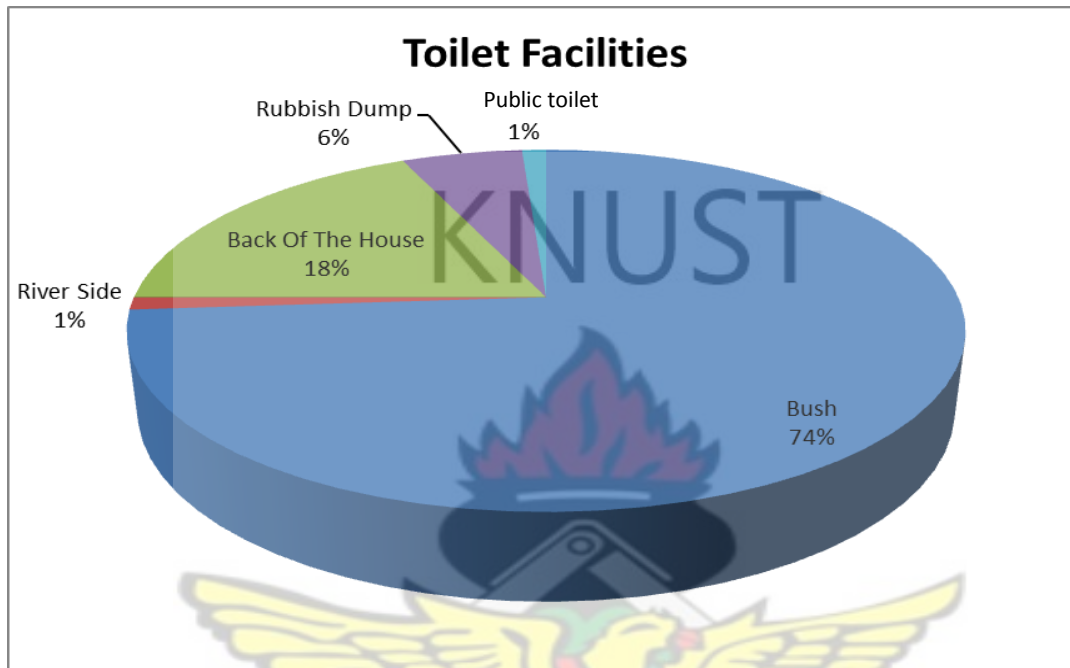
The above responses indicate that the culture of boiling unhygienic water which is the surest way to prevent water borne diseases was not practised by the people. This automatically will lead to the spread of water borne diseases like cholera, worms, diarrhoea and typhoid. A research conducted on dirty water and its related diseases by the Pacific Institute in 2002, indicated that both lower and higher income segments of the population may face the same problem of poor water situation, but the higher income households can afford private solutions like drilling bore holes, buying packed water or buying from private water operators. These solutions are too expensive for the rural poor. The reason being that the rural people are mainly low income earners. They rather spend their meagre income on the food needs of their families against working for alternative water sources or treating their water (Gleick, 2002).

#### **4.3.2 Sanitation Facilities**

The need for toilet facilities in every human society cannot be over emphasised. The unavailability of toilet facilities can have serious consequences on the community and

country as a whole. Therefore, the second part of the first objective looks at the places of convenience of communities before ProNet's intervention and its impact on their activities.

**Figure 4.4: Places of Convenience before Pronet's Intervention**



**Source: Field Survey, May 2011.**

From figure 4.4, majority of the respondents, 74% defecated in the bush. About 18% of the respondents also defecated at the back of their houses. Also, 6% of the respondents defecated at refuse dumps while 1% used the few public toilet facilities. It can be deduced from the responses that the people practised open defecation. This practise of open defecation exposes the people to snake bites and the contamination of water sources.

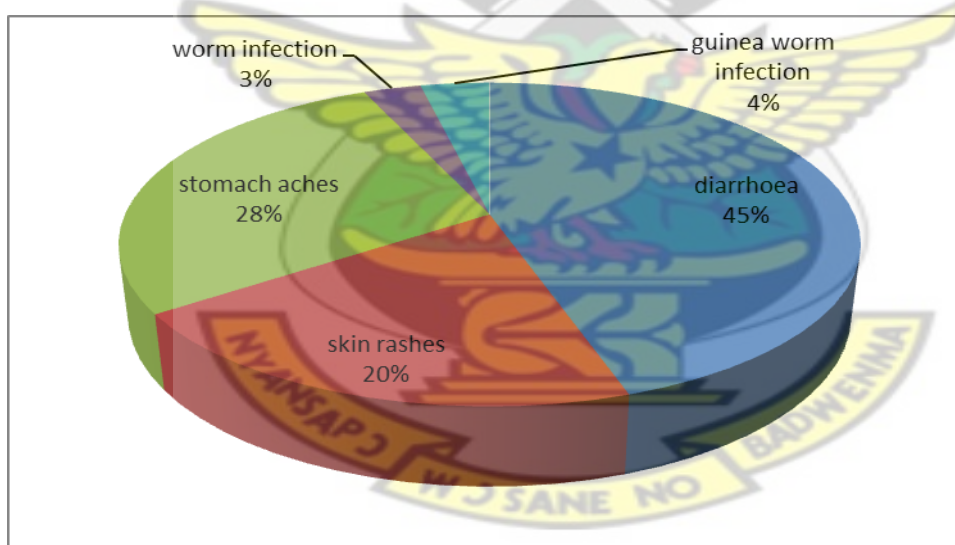
The poor water and sanitation situation as indicated by respondents from the communities was confirmed by officials from ProNet, CWSA and the District Assembly. They described the water and sanitation situation as appalling due to the fact that most of the communities depended on unsafe sources like ponds, streams and rivers for water and practised open defecation. They also argued that these practices had several negative

repercussions on the inhabitants in that cholera, diarrhoea, and skin diseases were endemic in the communities that were involved. These were evidenced in interactions with members of the communities.

### 4.3.3 Implication of Poor Water and Sanitation on Health, Education and Economic Activities

The communities practised open defecation before the intervention of ProNet as indicated in figure 4.4 and figure 4.1 also indicated that over 90% of the respondents depended on non-potable sources for their water supply. This section analyses the effects of these poor water and sanitation facilities on the health, education and economic activities of the people. These responses will help assess the water and sanitation situation before ProNet's intervention.

**Figure 4.5: Effects of Poor Water and Sanitation Supply on Health**



Source: Field Survey, May 2011.

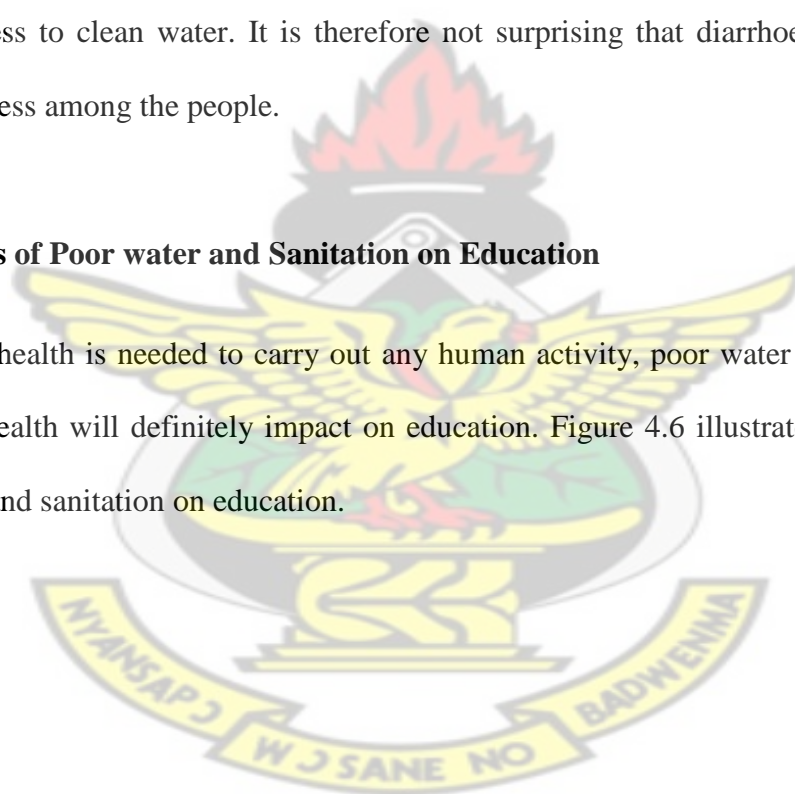
The responses on the effects of water and sanitation on the health of the people shows that 45% of the respondents associated frequent diarrhoea with the poor sanitation and water facilities. About 28% linked stomach aches to the poor water and sanitation situation. Skin rashes, guinea worm and worm infection had 20.4%, 3.6% 2.9% respectively were attributed to the same poor conditions. The greatest effect of poor water supply on the

health of the people was diarrhoea. These are diseases caused by getting in touch with contaminated water associated with open defecation. These effects affected the incomes and economic activities of the people.

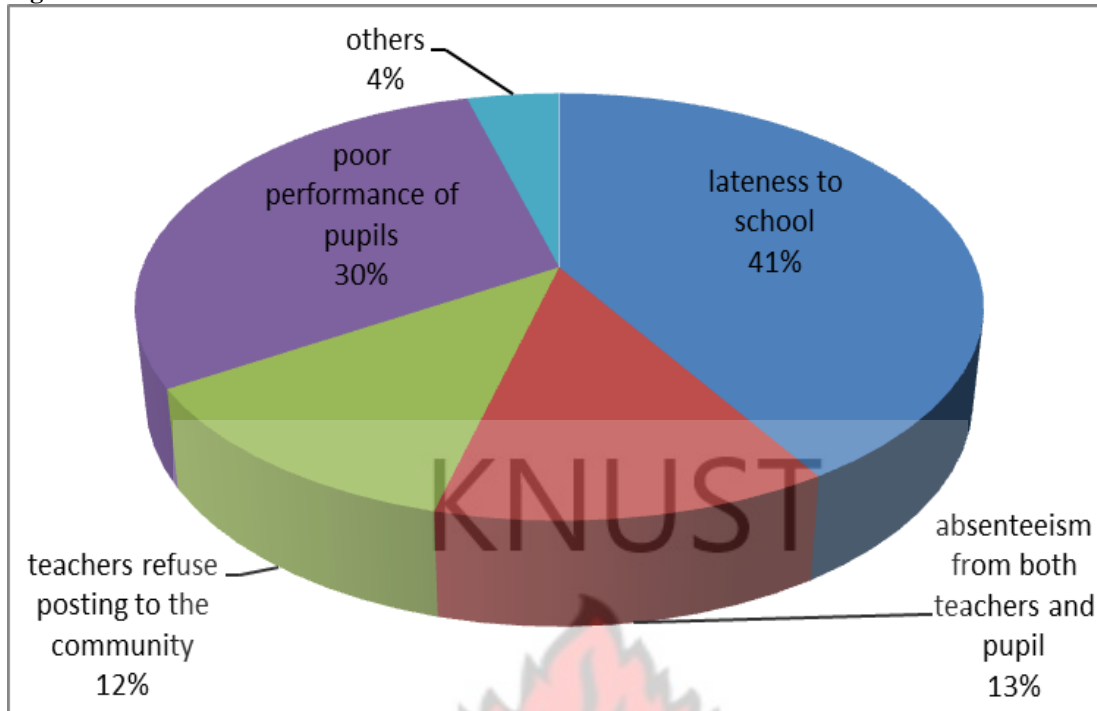
Water-Related Diseases (WRD) according, Gleick (2002) remain a major concern in much of the developing world as indicated in the figure 4.5. While data are incomplete, the World Health Organisation estimated in the year 2000 that, there were four billion cases of diarrhoea each year in addition to millions of other cases of illnesses associated with the lack of access to clean water. It is therefore not surprising that diarrhoea was the most reported illness among the people.

#### **4.3.4 Effects of Poor water and Sanitation on Education**

Since good health is needed to carry out any human activity, poor water and sanitation's effects on health will definitely impact on education. Figure 4.6 illustrates the effects of poor water and sanitation on education.



**Figure 4.6: Effects of Poor Water and Sanitation on Education**



**Source:** Field survey, 2011.

On the effects of poor water and sanitation on education in the study area, lateness to school by pupils (41%) was the most frequently mentioned whilst 30% of the respondents were also of the view that it led to poor performance of pupils in school, 13% related it to absenteeism on the part of teachers and pupils and 12% believed it led to teachers refusing postings to their communities. These responses indicate that majority of the respondents believed poor water supply and sanitation affected both pupils and teachers attitude towards education in the communities. This affects the performance of pupils during examinations and as such most of them cannot continue beyond the basic level.

The WATSAN leader in Donjang indicated that;

*‘we used not to force our children to go to school because previously there was no water for them to bath before going to school and we could not also allow them to use the little water we fetch after queuing over night at the pond’.*

Teachers were not living in the communities before the communities were provided with potable water by ProNet. This was because they lacked good water facilities. This made

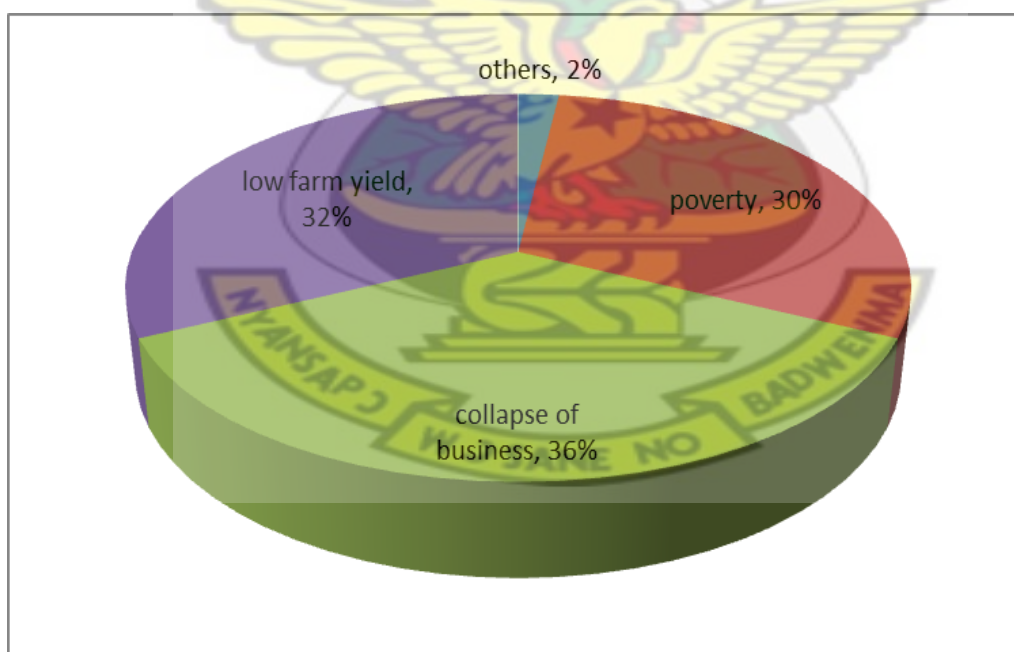


them come to school late which reduced the number of contact hours pupils had with teachers. This situation is not different from other parts of the world. For instance, DFID's (2000), research on the effects of poor water and sanitation on education in Ethiopia indicated that, children, particularly girls are often required to help their mothers with the time consuming task of fetching water at the expense of their education. Fetching water has been found in many countries to reduce children's time for schooling or playing.

#### 4.3.5 Effects of Poor Water and Sanitation on Economic Activities

The lack of water and sanitation infrastructure has complex effects on economic activities, which significantly influence people's overall well-being. These effects are illustrated in figure 4.7.

**Figure 4.7: Effects of Poor Water and Sanitation on Economic Activities before ProNet intervention**



**Source; Field Survey, May 2011.**

Inadequate water and sanitation services to the poor increase their cost of living, lower their income earning potential, damage their well-being and make life riskier. As indicated in figure 4.7, 36% attributed the collapse of businesses to poor water supply, 32% were of

the view that poor water supply has led to low farm yields, whereas 30% felt it led to poverty. Low farm yields occurred as a result of the effect of diseases caused by poor water and sanitation, which prevented the farmers from carrying out their income generating ventures. Some may have suffered from diseases related to water and sanitation since the water they used was unwholesome. Women who were engaged in pito brewing indicated that the poor water supply prevented them from brewing and that led to the collapse of their businesses. From the socio-economic data of respondents, it is realised that the people were basically involved in primary economic activities, and earnings from these activities are low. Therefore, their inability to carry out these activities effectively could have reduced their income earning potentials due to poor health and time spent on collecting water.

#### **4.4 Impact of ProNet Intervention in Water and Sanitation**

The second objective of this research is to assess the impact of ProNet interventions on water and sanitation in the study communities. The variables which are considered are the health, education and economic impact on the people. A brief history of ProNet and its activities in the district would also be discussed in this section.

##### **4.4.1 Brief History of ProNet Formation**

ProNet is an NGO which has been operating in the Nadowli district since 1995 and it is supported financially by organisations such as Water Aid, Concern Universal, CARE International and Plan- Ghana. ProNet's major activity is the provision of water and sanitation facilities to deprived rural dwellers. The mission statement of ProNet is "to have a sustainable and positive impact on rural communities in the Upper West, western corridor of the Northern and Eastern and Brong Ahafo regions in areas of healthy

livelihood, education and governance with gender and advocacy as cross-cutting issues”. The vision of ProNet is ensuring “a society of social justice” and it is headquartered in Wa in the Upper West Region of Ghana. The operations of ProNet first started in the Nadowli District. This was because of the urgent attention that was needed in the district with regard to water and sanitation. Tables 4.5 and 4.6 show some of the water and sanitation facilities provided by ProNet between the years 2000 – 2010.

**Table 4.5: Water Facilities Provided by ProNet in the Nadowli District from 2000-2010**

Name of Community	Type of Facility	Quantity
Jang- Goli	Hand-dug well	1
Kaleo- Buyuoyiri	Hand-dug well	1
Niiri	Hand-dug well	1
Puni	Hand-dug well	1
Meguo- Mantari	Water system	1
Gabilli	Borehole	2
Bamaara	Borehole	1
Koni	Borehole	1
Yaali	Borehole	1
Vuuyiri	Borehole	1
Donjang	Borehole	1
Gbangko	Borehole	1
Sankana	Borehole	1
Loho	Borehole	1
Goriyiri	Borehole	1

**Source: Field Survey, 2011**

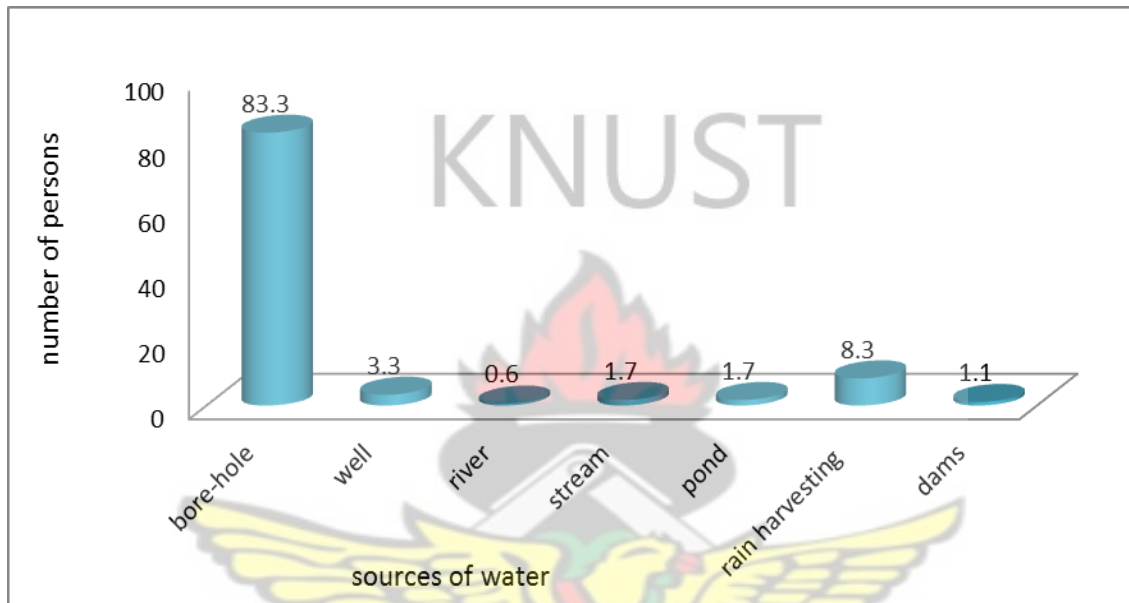
**Table 4.6: Sanitation Facilities Provided by ProNet in the Nadowli District from 2000-2010**

Name of Community	Type of Facility	Quantity
Kaleo- Buyuoyiri	VIP latrines	20
Niiri	VIP latrines	8
Chari Kpang-Naayiri	VIP latrines	2
Sabiila	VIP latrines	4
Donjang	VIP latrines	17
Sankana	VIP latrines	25
Goriyiri	VIP latrines	26
Loho	VIP latrines	45
Gbangko	VIP latrines	17

**Source: Field Survey, 2011.**

The facilities provided by ProNet for the communities in the Nadowli District make it a goal-oriented organisation that seeks the general welfare of the deprived in the society. Water sources for communities changed with ProNet's intervention as captured in figure 4.8.

**Figure 4.8: Sources of Water after the Intervention of Pronet**



**Source: Field Survey, May 2011.**

ProNet's intervention in the provision of water facilities within the five study communities has improved their access to safe water. From figure 4.8, 83.3% of the respondents now use water from the bore holes for domestic purposes. Less than 1% depends on rivers for their source of water supply. About 8% of the respondents said they use rain water for both drinking and other household activities. The sharp rise in the use of potable water for domestic as well as commercial purposes is attributed to ProNet intervention in the provision of boreholes in the study communities.

The positive response from the communities on the water situation after ProNet's intervention was confirmed by the responses from officials of CWSA, District Assembly and ProNet. The degree of water accessibility in the District for the past decade has



improved drastically. The reason is that, there has been the construction of more boreholes in most of the communities in the area. They attributed this to the interventions made by stakeholders in water and sanitation in the District, one of which is ProNet. The distribution of water facilities in the District indicated by the officials of the Assembly covered an average of about 67.1%; implying that although not all communities in the district are covered, majority of the people now have potable water facilities. But the CWSA and ProNet were however of the view that the Nadowli District had potable water coverage of about 80%. This they said was due to the number of water sources available in the District. Plate 4.3 shows one of the bore hole provided by ProNet for the Sankana community.

**PLATE 4.3: Bore hole provided by ProNet for the Sankana Community**



Source; Field Survey, May 2011.



#### **4.4.2 Toilet Facilities**

The second part of the second objective seeks to assess the impact of the sanitation facilities provided by ProNet on the sanitary lives of the people.

The sanitation condition before ProNet's intervention was very poor. This is because over 90% of the respondents were practising open defecation. About 1% used the few public toilet facilities available, but with poor sanitary conditions. During a focus group discussion in Gbangko on 11<sup>th</sup> May, 2011, a woman stated that:

*“the public toilet in our community has no attendant and therefore the place is always dirty. The toilet, since its construction, has never been emptied. Heat emanates from the hole whenever we use it. This heat makes us contract candidiasis. We all resort to open defecation after treatment”.*

ProNet helped these communities to own in-house toilet facilities by providing them with technical and some material (cement and pipes) support. The beneficiary house-holds also dug the pits with the right measurements given to them by ProNet and provided shelter to cover the latrines. On the conceptual framework on page 35, it is indicated that NGOs as part of their roles provide technical and financial support to help communities own water and sanitation facilities. This has been confirmed by the role ProNet has played in helping the communities own these facilities. After the intervention of Pronet, about 90% of the respondents in the study communities now attend nature's call in toilets at home. This is because they have been provided with in house toilet facilities.

Although much effort has been made by ProNet at improving sanitation in the District, it still remains a problem since most of the communities have not been covered in terms of sanitation facilities delivery. This was confirmed by officials of CWSA, District Assembly

and ProNet. They indicated that on sanitation, the situation in the District for the period under discussion has been unsatisfactory with the reasons being that there are inadequate lavatory facilities; few and poorly managed refuse dumping sites and poor sewerage systems. These account for the low sanitation coverage (11.1%) coverage in the District. Notwithstanding this unsatisfactory coverage in sanitation, credit has been given to ProNet by the District Assembly and CWSA officials for their efforts in improving the sanitation situation in the district. The beneficiary communities are no more littered with faecal matter and the people are very happy with the facilities (Nadowli District, 2009).

#### **4.4.3 Impact of ProNet Activities on Health**

Just as everyone needs water daily, everyone, rich and poor, also require a place of convenience. But where that takes place has a significant impact on family health. Private toilets and potable water benefit not only the household but also neighbours. Therefore, ProNet's activities in water and sanitation in the study communities impacts on the health of the people and this is captured in table 4.7.

**Table 4.7: Impact of Water and Sanitation on Health**

Impact	Yes	Percentage	No	percentage
Eradication of guinea worm	12	6.67	168	93.3
Prevented water and sanitation related diseases	180	100	0	0
Prevented snake bites	180	100	0	0

**Source: Field Survey, May 2011.**

The impact of the intervention of ProNet on water and sanitation in the Nadowli District has been significant in the lives of the people. A farmer from Donjang on the 11<sup>th</sup> May, 2011 said:

*“The water from the stream had a very bad smell whenever it rains. This is because the rain washes human excreta into the stream because we practised open defecation. But now we do not have that problem”.*

This is because all the respondents (100%) said improved water and sanitation facilities have led to a reduction in water and sanitation related diseases. The intervention by ProNet has reduced snake bites related to open defecation. A respondent at Goriyiri on the 10<sup>th</sup> May, 2011 said;

*‘My son attended nature’s call in the bush. He decided to pluck a leaf and clean himself and was bitten by a snake. But right now, my children use the toilet facility in the house’.*

**Plate 4.4: Pit Latrine**



**Source; Field Survey, May 2011.**

Plate 4.4 shows one of the pit latrines built by a household with the help of ProNet in Sankana, one of the study communities. About 6.7% of the respondents also believed that improvement in water and sanitation has led to very low incidence of guinea worm.

Improved water and sanitation since it impacts on health has trickle-down effect on education. Table 4.8 illustrates respondents' views on the impact of improved water and sanitation facilities on education in their communities.

**Table 4.8: Impact of Improved Water and Sanitation on Education**

Impact	Yes	Percentage
Prevented Lateness to school	180	100
Prevented absenteeism of pupils	180	100
Improvement in the performance of pupils	180	100

**Source: Field Survey, May 2011**

On the impact of ProNet's intervention of water and sanitation on education, all of the respondents said it has reduced absenteeism and lateness to school. Again, all the respondents agreed that the performance of the pupils have improved. They explained that most of their children can now go beyond the basic education level to the secondary and tertiary institutions. This means that the provision of these facilities have impacted positively on the lives of the people. For instance, UNICEF in the year 2000 invested in water and sanitation in some selected schools in Malawi, this reduced absenteeism among both teachers and pupils. It also improved enrolment of girls to an average of 94% compared to 67% across the continent of Africa (UNICEF, 2000).

#### ***4.4.4 Impact of ProNet intervention on Economic Activities***

The impact of ProNet interventions in water and sanitation on the economic activities of the respondents has been very significant. All of the respondents indicated that the provision of good water and sanitation facilities has increased their productivity, improved their business activities and above all led to an improvement in their living standards. This was as a result of good health they enjoyed from accessing good water and sanitation.

The conceptual framework in page 35 indicates that, if NGOs are able to construct water and sanitation facilities for the people, there is going to be an improved access to water and sanitation points. Less time will be spent in water collection and this will eventually lead to an improvement in the living standards of the people. There will also be an improvement in the water and sanitation coverage in the area. This has been confirmed by CWSA and ProNet that the water coverage is about 80% while that of sanitation is 11%, which is not good and since ProNet has found ways of dealing with the situation, coverage will be improved if more funds are available.

#### ***4.4.5 Other Water and Sanitation Services Provided by ProNet***

Other water and sanitation services have been provided by ProNet to improve the health conditions of the people. ProNet has provided the schools in the study communities with containers for hand washing in school. ProNet also carry out education on hand washing especially after visiting the toilet. They also educate the people on the benefits of cleaning their surroundings regularly. This has helped most of the communities to organise monthly clean up campaigns to keep their communities clean. It has prevented open defecation in these communities. ProNet has helped these communities with equipment like wheel barrows, cutlasses and shovels to help organise their clean up campaigns. The



communities are also educated on the repercussion of burying corpses within the community. This has led to a lot of them creating cemeteries outside the communities.

#### **4.5 Conclusion**

The discussions have revealed that the water and sanitation situation in Nadowli District has experienced a lot of improvement after ProNet's intervention in those communities. ProNet has been able to construct water and toilet facilities in some communities of the District. These facilities provided by ProNet have impacted on their health, education and economic activities. On health, there has been a reduction in diseases related to water and sanitation, reduced snake bites associated with open defecation and eradication of guinea worm. With reference to education, there has been an improvement in school attendance, reduced lateness and absenteeism. The economic activities of the people have also seen significant improvement in that more time is spent on their economic activities rather than using that time to search for water and attend to their health. The other stakeholders in water and sanitation delivery in the District apart from ProNet are appreciative of the fact that ProNet is a force to reckon with when it comes to water and sanitation delivery in rural communities.

## **CHAPTER FIVE**

### **5.0 PRONET'S COLLABORATION WITH OTHER STAKEHOLDERS AND CHALLENGES IN WATER AND SANITATION DELIVERY**

#### **5.1 Introduction**

Chapter four analysed the responses of members of the study communities with reference to the water and sanitation situation before and after the interventions of ProNet. From the analysis, it is realised that the interventions of ProNet have improved the water and sanitation situation in the study communities. ProNet has been able to carry out its activities successfully with the collaboration of some institutions in the Nadowli District. Therefore, the third objective of the thesis is to assess the extent of collaboration between ProNet and other stakeholders in providing water and sanitation in the Nadowli District. This chapter deals with ProNet's collaboration with the CWSA and District Assembly in water and sanitation delivery. The prospects and challenges of ProNet are also discussed.

#### **5.2 Extent of Collaboration between the Assembly and ProNet in Water and Sanitation Delivery**

The study established that there have been some forms of collaboration between the Assembly and ProNet in the provision of water and sanitation facilities in the District since ProNet's establishment in 1995. The collaborations have been in the area of technical and financial assistances, collaborative meetings, awareness creation on the maintenance of boreholes constructed by these partners in the district as well as household lavatory construction. For instance, ProNet in collaboration with the Assembly has partnered Global Water Initiative (GWI) in the provision of potable water and sanitation facilities in the District. Therefore, the level of cooperation between the Assembly and ProNet has been commendable. The Nadowli District has collaborated with ProNet to

construct a small water system for the people of Meguo-Mantari. These forms of collaboration have yielded satisfactory results.

### **5.3 Extent of Collaboration between CWSA and ProNet**

The study further found out that there has been collaboration between CWSA and ProNet since 1995. The collaborations between them are in the form of technical and financial assistances and collaborative meetings. The level of cooperation between the CWSA and ProNet has been satisfactory, in that CWSA and ProNet are development partners and as such the public is informed about their interventions in the districts that they exist and operate especially in the northern regions of Ghana. ProNet has been giving technical support to CWSA in providing water and sanitation facilities in the Nadowli District. They further explained that the two organisations have been providing joint training and technical services to communities in the district. Interaction with officials of CWSA and other agents (NGOs) of development revealed that there has been effective collaboration with the NGOs in the district especially those that are into water and sanitation facilities provision.

ProNet officials therefore, classified the level of cooperation between ProNet, Nadowli District Assembly and CWSA as satisfactory with the reason that they have planned and implemented World Water Day in the communities for the last two years.

### **5.4 Extent of Collaboration between ProNet and Beneficiary Communities**

ProNet has been collaborating with beneficiary communities before, during and after implementation of projects. With respect to the aspect of the project that the people were involved, it was realised that the people are usually involved in the siting, construction,

operation and maintenance of the facilities but are not involved in deciding the type of facility that should be constructed and they were not levied to generate funds for the construction of the facilities. The respondents moreover argued that the people are involved in the establishment of the facilities through communal labour.

## **5.5 The Challenges and Prospects of ProNet in Water and Sanitation Delivery**

The fourth objective of this research seeks to find out the challenges faced by ProNet in water and sanitation delivery and what solutions have been instituted to solve these problems. The future of ProNet with the District is also discussed.

### **5.5.1 Challenges faced by Pronet in carrying out their Activities and their Solutions**

These refer to the problems encountered by Pronet in carrying out their activities and the plans and projections for the Nadowli District with reference to water and sanitation. The study found a lot of challenges affecting ProNet in their quest to providing potable water and sanitation facilities for communities within their areas of operation. Among these were high level of poverty in the region which hindered the level of the communities' contribution to the operations and maintenance of facilities provided by ProNet. Again, the youth in the north are migrating to southern Ghana thus making labour contributions difficult. The MDG 1 aims to eradicate extreme poverty and hunger by 2015. Though efforts are being made by the government to achieve this, the District Poverty profile developed by the NDPC and GTZ in 2004, indicated that poverty was still very high in some districts in northern Ghana. This has warranted the mass migration of the youth to seek greener pastures outside the District. Furthermore, it has been indicated that there is low level of investment in the sanitation sector by the donor organisations in the District which support NGOs to carry out their activities. NGOs are not profit making

organisations (Bidet, 2002) and therefore depend on donor organisations and individuals for financial assistance. The donor organisations sometimes determine what their funds should be used for. This restricts the utilisation of funds by NGOs.

Generally, the measures adopted by ProNet to solve these problems include; an increase in community level education and sensitisation on the maintenance of the water and sanitation facilities provided. Again, there has been the implementation of livelihood projects like FARMPLUS which provides livestock, fertilisers and other incentives to increase animal production. This is meant to motivate the energetic young men to stay back home and help develop their communities since communal labour is the key ingredient for the success of their projects. Also, there is in place an Integrated Water Resource Management, where water systems and irrigation dams have been constructed under Global Water Initiative. This is also to facilitate dry season gardening which will improve the income levels of practitioners.

It can be noted that although ProNet is faced with several challenges in their operations, the organisation has been able to effectively design mechanisms to curb them to ensure that their mission and vision are achieved in the short and long runs of their operations.

## **5.6 The Future of ProNet**

The plans and projections of ProNet for the rural communities concerning water and sanitation as expressed by the officials are that; ProNet has realised that water accessibility far exceed that of sanitation and for that matter, has adopted a new approach under sanitation. This approach they term as Community Led Total Sanitation (CLTS) is where communities initiate actions and address their own sanitation problems. New settlements



will be encouraged to build toilet facilities since the people are educated on the effects of unsanitary conditions.

## **5.7 Conclusion**

To conclude this chapter, it should be brought to the fore that, ProNet's effort to bring good water and sanitation to the people in the District is on course and can be achieved. ProNet has collaborated with the District Assembly and CWSA to provide water and sanitation facilities. These collaborations have been in the form of technical, financial and advocacy for facilities. ProNet has also faced some challenges in the process of carrying out their activities. They include high levels of poverty among the people, mass migration of the youth to southern Ghana and inadequate funding for sanitation projects. These problems have been overcome by the implementation of FARMPLUS. Small water systems have been constructed for the communities with the problem of hydrogeology. The prospects for the future of ProNet's activities in the district are bright. They have adopted the community led total sanitation to address the sanitation problem since that area is lacking the required funding.

## CHAPTER SIX

### SUMMARY, CONCLUSION AND RECOMMENDATIONS

#### 6.0 Introduction

Goal 7c of the MDGs seeks to reduce by half the population in the world without potable water and sanitation by 2015. NGOs have been playing a lead role through advocacy and monitoring in achieving this objective. Safe water and sanitation facilities were identified to be among the causes of high school enrolment especially for girls, increase in economic activities and the good health of the people which affects the overall development of a country. This chapter focuses on the summary of the findings, conclusions and recommendations of the study.

#### 6.1 Summary

The study assessed the role of ProNet in the provision of water and sanitation in the Nadowli District. The key findings are as follows:

The water and sanitation situation was described as very poor before the intervention of ProNet. The people developed a lot of coping strategies including reliance on ponds, streams, wells, dams, rivers. The most unfortunate thing is that these sources were largely unreliable because they dried up during the long dry season. This made them spend long hours looking for water. On sanitation, the people mainly practised open defecation which had a lot of repercussions on their lives. It was realised that water and sanitation in the study communities have improved. The water and sanitation coverage has increased to 67.1% and 11.1% respectively. This confirms the proposition that NGOs play a key role in water and sanitation delivery. They also play a critical role in the realisation of MDG 7c. The people however have complained that the provision of a bore hole each in

communities like Loho and Gbangko were inadequate since most of them end up staying long hours to access water during the rash hours of morning and evening.

Improvement in water and sanitation has had effects on education, health and economic activities of the people. Education in the study area has seen some improvement due to the fact that pupils are now able to go to school regularly, early and on time. This has increased the contact hours in schools as a result of a reduction in absenteeism on the part of pupils. On economic activities, there has been an improvement in the economic activities of the people. They are now able to conduct their activities which include farming, charcoal burning, shea butter processing, petty trading and pito brewing. This has improved their living standards. The health status of the people has improved significantly. The reduction of people complaining of stomach aches and diarrhoea diseases were attributed to the provision of the facilities in the communities. Water and sanitation are essential for human existence, health and productivity without which man will live in complete misery and poverty. It is therefore, not surprising that the facilities provided have improved the general living standards of the people.

There has been a lot of co-operation between ProNet, CWSA and the Nadowli District Assembly in providing water and sanitation facilities. The collaboration between the three institutions has been in the form of technical and financial assistances, and collaborative meetings.

ProNet faces a lot of challenges in their quest to providing potable water and sanitation facilities to communities in their catchment area. Among the challenges include high level of poverty in the region; migration of the youth to southern Ghana thus making labour contributions difficult; financial constraints and the unfavourable hydrogeology in certain

communities. Some of these challenges were overcome by projects like FARMPLUS and the Integrated Water Resource Management. ProNet has also developed proposals for funding the sanitation sector. Since water coverage is satisfactory, the Community Led Total Sanitation (CLTS) has been initiated to address the sanitation situation.

The NGO further embarks on hygiene education which has really changed some habits like creating cemeteries within the communities, not washing their hands after visiting the toilet and also not keeping their surroundings clean. Communities within ProNet's operation have created cemeteries at the outskirts. Monthly clean up exercises are held to keep their communities clean. This was evident when the communities were visited. Adults and children are now more health conscious than before. The officials from the District Assembly indicated that although the sanitation situation was not the best in the District, there was a reduction in diseases related to water and sanitation.

## **6.2 Conclusion**

In relating the conceptual framework to the study, the following observations have been made:

The three key elements identified in the conceptual framework are; inputs, outputs and impact. Each of these has been identified with regard to the role NGOs play in water and sanitation in the Nadowli District. With regard to inputs, NGOs give technical, financial, and educational support, play advocacy roles and collaborates with other institutions among others to promote good water and sanitation in the Nadowli District. During the study, it was realised that ProNet played this input roles by constructing or rehabilitating safe water facilities, constructing improved latrines and additionally educated the people on hygiene awareness. This has been acknowledged by the people because they now

organise clean up exercises periodically to keep their communities clean apart from the toilet facilities provided by ProNet. They have been educated on the negative effects of burying corpses within the community. This has led to the creation of cemeteries at the outskirts. Also, from the analyses, the Nadowli District Planning Officer and the Co-ordinator Director were satisfied with the level of cooperation between the District Assembly and Pronet. The CWSA officials were also satisfied with the level of cooperation between them and ProNet. This level of cooperation both parties believe has helped in providing good water and sanitation facilities in deprived areas in the Nadowli District. The contributions of ProNet will go a long way to help the Nadowli District in achieving the MDG in water and sanitation by 2015. A research conducted in 2005 on the contribution of civil society towards achieving the MDGs in The Gambia indicated that the government sought the help of NGOs to help in achieving the targets since they were challenging and demanded consistent and sustained financial, technical and human resource inputs, buttressed by concerted and coordinated efforts by all stakeholders. It was against this background that civil society organisations made the MDG targets the centrepiece of their development work. For instance, in water and sanitation, there has been a reduction of the population without water from 48% in 1990 to 16% in 2000 (Republic of Gambia, 2005).

The second part of the framework looks at the output of the inputs made by NGOs. The expected outcomes were to improve access to water and sanitation services. This has been achieved by Pronet because they have been able to construct wells, boreholes and pit latrines in communities such as Donjang, Sankana and others just to mention but a few. These facilities have given the people easy access to water and sanitation facilities. Less time is also used in accessing the facility as compared to the time these facilities were lacking in these communities. This had led to quarrels among women at their water



sources. Maintenance of such facilities is high in the beneficiary communities because of the training offered the people by ProNet.

The last section of the framework is the impact of the water and sanitation facilities on the lives of the people. The facilities provided by ProNet have improved the health, economic activities and education in the beneficiary communities. On health, the people no more complain of the regular stomach upsets, the body itching after bathing and diarrhoea. This has helped economically to improve their standard of living. Most of the respondents who are women now say they can brew their pito regularly to help them earn a living. It has also the time spent in fetching water and therefore saves them time to engage in other economic activities. Children in school now attend school regularly and on time. Parents now even force their children to go to school as compared to the time when they did not have water. Children used to stay home because they did not have water and now no child can use that as an excuse. The WHO (2003) reports show that the provision of water, sanitation and hygiene facilities reduces mortality caused by diarrhoeal disease by an average of 65% in the year 2001.

### **6.3 Recommendations**

Based on the findings of the study, the following recommendations are made to improve the role of NGOs in water and sanitation.

It is recommended that the CWS A officials should visit the communities regularly to assess the activities of ProNet. This can be achieved by stakeholders involved in the provision of such facilities setting up effective monitoring and evaluation teams. These teams will help detect any problems affecting the water points and therefore solve them

promptly. That will prevent the people from resorting to their unhygienic sources of water supply if their problems are not solved.

The number of water facilities provided to the communities was not enough to meet the water needs of the communities. Although they have potable water now, the population out numbers the facility and therefore much time is spent at the bore holes. This sometimes results in quarrels at the water points during mornings and evenings. For instance, the UNICEF/WHO JMP (2009) standards indicate that, each spout of a borehole or standpipe must serve 300 persons and hand-dug well 150 persons. But this is not the situation in some communities like Sankana where more than 300 persons depend on just one bore hole. The Sankana community with a population of about 2300 people has three bore holes. But the population out- numbers the water points. This therefore generated quarrel at the bore hole during the rush hours of morning and evening. Most of the water points provided by the District Assembly have not been renovated for so long a time. This has resulted in the regular breakdown of most of them. More boreholes should be constructed to meet the increasing population of these areas. Also, WATSAN committees should be strengthened to ensure routine maintenance whether the water points are broken down or not to keep the facilities in good shape for the communities to benefit from them fully.

With respect to sanitation, It was realised that the people are not interested in the few public toilets but like the household pit latrines. This is due to the insanitary conditions of the public toilets. Measures should be put in place to help the rest of the households to own pit latrines. The large households should be supported to build two of the toilets. This

will prevent queues at the toilets. Assembly bye-laws should be enforced to ensure that all existing and new settlements should build toilet facilities.

Since the hygiene education has gone down well in communities where ProNet has undertaken sanitation activities, the District water and sanitation teams should replicate it in other communities outside ProNet's interventions. This will help prevent diseases in these communities. If water and sanitation facilities are provided and the people do not practise good hygiene, they will definitely fall ill.

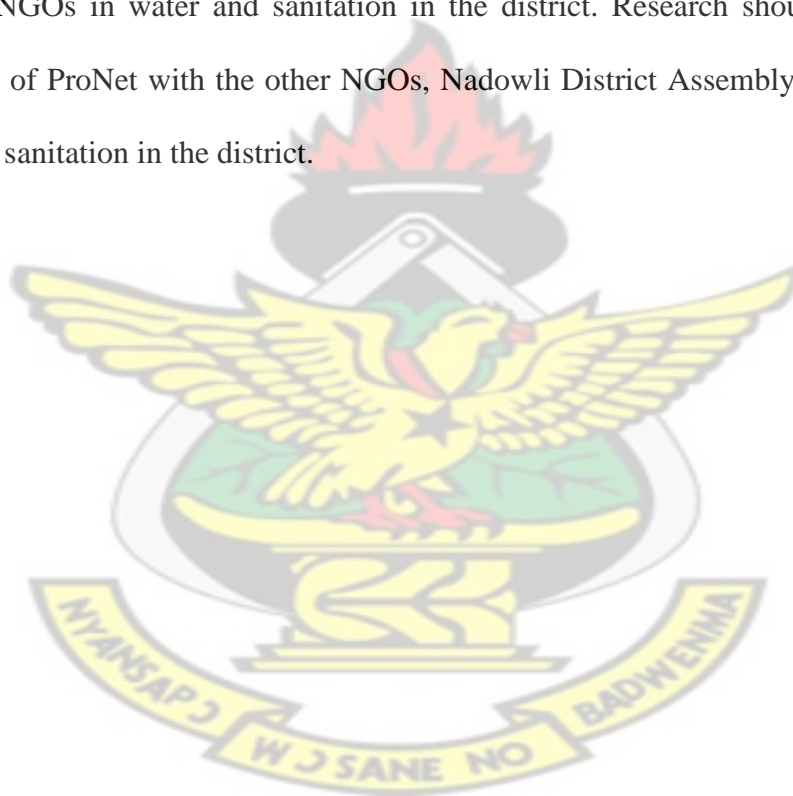
The public should be encouraged to pay for the water they fetch from the boreholes. Such monies can be used to cover operational and maintenance cost. This can be done by setting up Water and Sanitation Development Board (WSBD) as was seen in the study communities if there is none in other communities to sustain or manage the systems.

The government should commit more funding into the water, sanitation and hygiene sector. This will enable the District Assembly give priority to WATSAN (water and sanitation) projects under their medium term development.

It is hoped that these recommendations when implemented will contribute immensely to the roles NGOs play in water and sanitation in rural Ghana and Nadowli District to be specific.

In effect, the objectives of the research have been achieved. First of all, the research has been able to describe the water and sanitation situation before the intervention of ProNet as poor. Secondly, it established the fact that the poor water and sanitation situation

affected the health, education and economic activities of the people. Pupils were not attending school regularly, they experienced water related diseases like skin rashes and diarrhoea, and this led to wide spread poverty. Thirdly, there was collaboration between ProNet and other agents in water and sanitation provision like CWSA, District Assembly and other NGOs. Finally, the prospects of ProNet in water and sanitation provision are bright since water coverage has improved to 67.1% and sanitation 11%. But efforts are being made to improve the sanitation coverage. The following are recommended for further research. Future research should be conducted to assess the contributions of the other three NGOs in water and sanitation in the district. Research should compare the performance of ProNet with the other NGOs, Nadowli District Assembly and the CWSA in water and sanitation in the district.



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**APPENDIX A: QUESTIONNAIRE FOR THE MEMBERS OF THE  
COMMUNITIES  
KWAME NKRUMAH UNIVERSITY OF SCIENCE AND TECHNOLOGY  
DEPARTMENT OF GEOGRAPHY AND RURAL DEVELOPMENT**

This study is purely for academic purposes and is aimed at assessing the role Professional Network in the provision of water and sanitation in the Nadowli District. Respondents are therefore assured that any information provided will be treated confidentially.

**Please tick [√] where appropriate and use NA where question is not applicable to you.**

**SECTION A: Socio - Demographic characteristics**

1. Sex:

1. Male [ ]      2. Female [ ]

2. Age:

1. 10 – 20 [ ]  
2. 21 – 30 [ ]  
3. 31 – 40 [ ]  
4. 41 -50 [ ]  
5. 51-60 [ ]  
6. 60+ [ ]

3. Educational level

1. None/no formal education [ ]  
2. Primary [ ]  
3. JSS/middle [ ]  
4. Secondary/technical/commercial [ ]  
5. Training college [ ]  
6. Tertiary education [please specify].....  
7. Others (please specify) .....

4. Occupation

1. Farmer [ ]  
2. Trader [ ]  
3. Pito brewer [ ]  
4. Carpenter [ ]

5. Nurse [ ]
6. Teacher [ ]
7. Others (specify) .....

5. Which community do you live in?

1. Donjang [ ]
2. Sankana [ ]
3. Loho [ ]
4. Gbangko [ ]
5. Goriyiri [ ]

6. How many years have you stayed in the community?

1. Less than 1 year [ ]
2. 1 – 2 years [ ]
3. 3 – 5 years [ ]
4. 6 – 10 years [ ]
5. 10 years and above [ ]

7. Income levels in Ghana cedis

1. Below 50 [ ]
2. 51 – 100 [ ]
3. 101 – 150 [ ]
4. 151 – 200 [ ]
5. 201 – 250 [ ]
6. 251 – 300 [ ]
7. Above 300 [ ]

8. Religious denomination?

1. Christian [ ]
2. Muslim [ ]
3. Traditional [ ]

## **SECTION B: Water and sanitation situation before Pronet intervention**

9. Have you heard of the NGO called Pronet that provides water and sanitation in the community?

Yes [ ]

No [ ]

10. How long has Pronet operated in your community? .....

11. How many water and toilet facilities have they been able to provide your community?

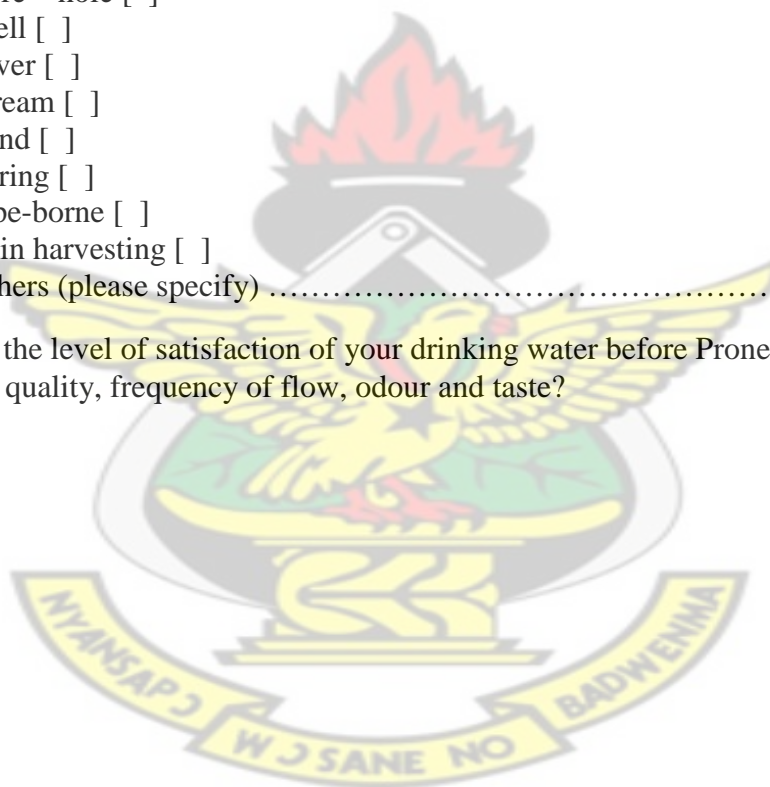
A. Water .....

B. Toilet .....

12. What was your source of water supply for drinking before Pronet's intervention?

1. Bore – hole [ ]
2. Well [ ]
3. River [ ]
4. Stream [ ]
5. Pond [ ]
6. Spring [ ]
7. Pipe-borne [ ]
8. Rain harvesting [ ]
9. Others (please specify) .....

13. What was the level of satisfaction of your drinking water before Pronet's intervention in terms of its quality, frequency of flow, odour and taste?



Please use the indicators below

	Quality	Frequency of flow	Odour	Taste
1. Excellent	[ ]	[ ]	[ ]	[ ]
2. Very good	[ ]	[ ]	[ ]	[ ]
3. Good	[ ]	[ ]	[ ]	[ ]
4. Bad	[ ]	[ ]	[ ]	[ ]
5. Very bad	[ ]	[ ]	[ ]	[ ]

14. What was your source of water for other domestic purposes before Pronet's intervention?

1. Bore – hole [ ]
2. Well [ ]
3. River [ ]
4. Stream [ ]
5. Pond [ ]
6. Spring [ ]
7. Pipe-borne [ ]
8. Rain harvesting [ ]
9. Others (please specify) .....

15. What was the state of your source of water for other domestic activities in terms of its quality, frequency of flow, odour and taste?

Please use the indicators below

	Quality	Frequency of flow	Odour	Taste
1. Excellent	[ ]	[ ]	[ ]	[ ]
2. Very good	[ ]	[ ]	[ ]	[ ]
3. Good	[ ]	[ ]	[ ]	[ ]
4. Bad	[ ]	[ ]	[ ]	[ ]
5. Very bad	[ ]	[ ]	[ ]	[ ]

16. How long did it take you to fetch water and return?

1. Less than 5 minutes [ ]
2. 5 – 10 minutes [ ]
3. 10 – 15 minutes [ ]
4. 15 – 20 minutes [ ]
5. Above 20 minutes (please specify).....



17. Did you get water from that source throughout the year?

Yes [ ]

No [ ]

18. If no, please explain .....

19. How did you treat your water before drinking? (Tick all that apply)

1. Boiling [ ]

2. Adding alum to water [ ]

3. Putting the water down to settle [ ]

4. Filtering the water [ ]

5. No treatment [ ]

6. Others (specify).....

20. Did the water have any effect on your health?

Yes [ ]

No [ ]

21. If yes, what were its effects on your health? (Tick all that apply)

1. Diarrhoea [ ]

2. Skin rashes [ ]

3. Stomach aches [ ]

4. Worm infection [ ]

5. Guinea worm infection [ ]

22. Please explain your answer above.....

23. What were its effects on education?

1. Lateness to school [ ]

2. Absenteeism from both teachers and pupils [ ]

3. Teachers refuse postings to the community [ ]

4. Poor performance of pupils [ ]

5. Others (please specify) .....

24. What were its effects on economic activities?

1. Low farm yields [ ]

2. Collapse of business [ ]

3. Deformity [ ]

4. Poverty [ ]

5. Others (please specify) .....

### **Toilet facilities**

25. Has Pronet constructed any toilet facility you in the community?

Yes [ ]

No [ ]

26. If yes, how many are they.....

27. Before the construction of the toilet facility, where did you attend nature's call?

1. Bush [ ]

2. River side [ ]

3. Back of the house [ ]

4. Rubbish dump [ ]

5. Dig o hole and do it [ ]

6. Others (specify) .....

### **SECTION C: Impact of Pronet on water and sanitation**

28. What is your source of water for drinking now?

1. Bore – hole [ ]

2. Well [ ]

3. Pipe-borne [ ]

4. Rain harvesting [ ]

5. Others (please specify) .....

29. What is your source of water for other domestic purposes such as cooking, washing now? (Tick all that apply)

1. Bore – hole [ ]

2. Well [ ]

3. River [ ]

4. Stream [ ]

5. Pond [ ]

6. Spring [ ]

7. Pipe-borne [ ]

8. Rain harvesting [ ]
9. Others (please specify) .....
30. How long does it take you to fetch water and return?
1. Less than 5 minutes [ ]
2. 5 – 10 minutes [ ]
3. 10 – 15 minutes [ ]
4. 15 – 20 minutes [ ]
5. Above 20 minutes (please specify).....
31. Where do you attend nature's call now?
1. In – house toilet facility [ ]
2. Public toilet facility [ ]
3. Others (please specify) .....
32. What type of toilet facility is it?
1. Water- closet [ ]
2. KVIP [ ]
3. Pit latrine [ ]
4. Pan latrine [ ]
33. What is your level of satisfaction of Pronet's sanitation facilities?
1. Excellent [ ]
2. Very good [ ]
3. Good [ ]
4. Bad [ ]
5. Very bad [ ]

**SECTION D: Extent of collaboration between Pronet and the community**

34. In what way(s) did you or your community contribute to the construction of the water facility?
1. Communal labour [ ]
2. Payment of levy [ ]
3. Supply of raw materials [ ]
4. Others (please specify) .....

35. In what way(s) did you or your community contribute to the construction of the toilet facility?

1. Communal labour [ ]
2. Payment of levy [ ]
3. Supply of raw materials [ ]
4. Others (please specify) .....

36. Which aspects of the project implementation were you consulted?

1. Type of water or sanitation facility suitable for the community [ ]
2. Where the facility should be sited [ ]
3. Mode of community contribution to the project [ ]
4. Maintenance of the facility [ ]

37. To what extent has the interventions of Pronet in water and sanitation helped the community in terms of health?

1. Reduce infant mortality [ ]
2. Eradicated guinea worm disease [ ]
3. Prevented water and sanitation related disease [ ]
4. Help prevented snake bites [ ]
5. Others (please specify).....

38. To what extent has the interventions of Pronet in water and sanitation helped the community in terms of education?

1. Prevented lateness on the part of pupils to school [ ]
2. Prevented absenteeism from both teachers and students [ ]
3. Teachers now accept postings to the community [ ]
4. Improvement in the performance of pupils [ ]
5. Others (please specify).....

39. To what extent has the interventions of Pronet in water and sanitation helped the community in terms of economic activities?

1. Improved the living standards of the people [ ]
2. High productivity [ ]
3. Improvement in business activities [ ]
4. Reduced poverty [ ]

5. Others (please specify).....

**SECTION E: Other water and sanitation services provided by Pronet**

40. What other services in relation to water and sanitation does Pronet provide?

1. Washing of hands before and after visiting the toilet [ ☐ ]
2. Education to keep our surroundings clean [ ☐ ]
3. Provide containers for washing of hands in schools [ ☐ ]
4. Education to prevent open defecation [ ☐ ]
5. Education on burying corpse in the cemetery not in the community [ ☐ ]
6. Others (please specify) .....

41. Have these services influenced your lives positively?

Yes [ ☐ ]

No [ ☐ ]

42. Please explain your answer above .....

**SECTION F: Challenges in terms of water and sanitation and suggestions for delivery**

43. What are the challenges you face in assessing the water and sanitation facilities?

1. Distance being far from my home [ ☐ ]
2. Payment of levy before assessing the facilities [ ☐ ]
3. Water does not taste good [ ☐ ]
4. Population is more than facilities [ ☐ ]
5. Takes time to be repaired when it breaks down [ ☐ ]
6. Others (please specify) .....

44. What should be done to improve the water and sanitation delivery to your community?  
.....

THANK YOU FOR YOUR CO-OPERATION



**APPENDIX B: QUESTIONNAIRE FOR THE NADOWLI DISTRICT ASSEMBLY  
KWAME NKRUMAH UNIVERSITY OF SCIENCE AND TECHNOLOGY**

**DEPARTMENT OF GEOGRAPHY AND RURAL DEVELOPMENT**

This study is purely for academic purposes and is aimed at assessing the role of NGOs in the provision of water and sanitation in the Nadowli District. Respondents are therefore assured that information provided will be treated confidentially.

**Please tick [✓] where appropriate and use NA where question is not applicable to you.**

**SECTION A: Background of the Nadowli District Assembly**

1. Present position .....
2. What is the core function of the Nadowli District Assembly.....  
.....
3. What is the number of NGOs operating in the Nadowli District? .....
4. How many NGOs are into water and sanitation in the district.....

**SECTION B: Water and sanitation situation in the study area.**

5. What is the trend of the water situation in the Nadowli District for the past 10 years?  
Satisfactory [ ]  
Unsatisfactory [ ]
6. Please explain your choice of answer above.....
7. How are the people coping with the water situation in the District?
  1. Depending on pipe borne water [ ]
  2. Depending on rivers, ponds, streams and dams [ ]
  3. Depending on bore-holes [ ]
  4. Depending on wells [ ]
8. What is the percentage coverage of water in the Nadowli District? .....
9. What can be done to improve water the coverage level? .....
10. What is the trend of the sanitation situation in the Nadowli District for the past 10 years?  
Satisfactory [ ]

Unsatisfactory [ ]

11. Please explain your choice of answer above.....

12. How are the people coping with the sanitation situation in the District?

1. Practising open defecation [ ]
2. Making use of the few public toilets [ ]
3. Defecating into the water bodies around [ ]

13. What is the effect of these coping strategies on the lives of the people?

1. Diarrhoea [ ]
2. Guinea worm [ ]
3. Cholera [ ]
4. Worm infestation [ ]

14. What is the percentage coverage of sanitation in the Nadowli District? .....

15. What can be done to improve the sanitation coverage level? .....

16. What is the state of the water and sanitation related diseases in the district?

Increased [ ]

Reduced [ ]

Deteriorated [ ]

**SECTION C: Extend of collaboration between Pronet and other stakeholders in water and sanitation.**

16. Has there been any collaboration between the District Assembly and Pronet in providing water and sanitation facilities?

Yes [ ]

No [ ]

17. If yes, what has been the form of collaboration.....

18. What was the level of co-operation between the District Assembly and Pronet?

Satisfactory [ ]

Unsatisfactory [ ]

19. Give reasons for your response above .....

20. How will you assess the performance of Pronet in the District?

Satisfactory [ ]

Unsatisfactory [ ]

Excellent [ ]

21. Give reasons for your choice of answer above .....

22. What should be done to ensure adequate water and sanitation delivery in the Nadowli District.....

THANK YOU FOR YOUR CO-OPERATION.

KNUST



## APPENDIX C: QUESTIONNAIRE FOR THE DISTRICT CWSA OFFICIALS

### KWAME NKRUMAH UNIVERSITY OF SCIENCE AND TECHNOLOGY

#### DEPARTMENT OF GEOGRAPHY AND RURAL DEVELOPMENT

This study is purely for academic purposes and is aimed at assessing the role Professional Network in the provision of water and sanitation in the Nadowli District. Respondents are therefore assured that any piece of information provided will be treated confidentially.

**Please tick [☒] where appropriate and use NA where question is not applicable to you.**

#### **SECTION A: Background of CWSA.**

1. Job title .....
2. What is the core function of the Community Water and Sanitation Agency .....  
.....
3. What is the vision of CWSA.....
4. How many years has CWSA been in operation .....
5. How long has CWSA operated in the Nadowli District .....
6. Where does it get its funding from .....

#### **SECTION B: Water and sanitation situation in the study area.**

7. What is the trend of the water situation in the Nadowli District for the past 10 years?  
Satisfactory [ ☐ ]  
Unsatisfactory [ ☐ ]
8. Please explain your choice of answer above.....
9. How are the people coping with the water situation in the District?
  1. Depending on pipe borne water [ ☐ ]
  2. Depending on rivers, ponds, streams and dams [ ☐ ]
  3. Depending on bore-holes [ ☐ ]
  4. Depending on wells [ ☐ ]
10. What is the trend of the sanitation situation in the Nadowli District for the past 10 years?  
Satisfactory [ ☐ ]  
Unsatisfactory [ ☐ ]
11. Please explain your choice of answer above.....

12. How are the people coping with the sanitation situation in the District?

1. Practising open defecation [ ]
2. Making use of the few public toilets [ ]
3. Defecating into the water bodies around [ ]

13. What is the effect of these coping strategies on the lives of the people?

1. Diarrhoea [ ]
2. Guinea worm [ ]
3. Cholera [ ]
4. Worm infestation [ ]

14. What is the state of the water and sanitation related diseases in the district?

Increased [ ]

Reduced [ ]

Deteriorated [ ]

**SECTION C: Extent of collaboration between CWSA and Pronet**

15. Has there been any collaboration between the CWSA and Pronet in providing water and sanitation facilities?

Yes [ ]

No [ ]

16. If yes, what has been the form of collaboration?

1. Technical assistance [ ]
2. Financial assistance [ ]
3. Equipment [ ]
4. Materials for facilities [ ]

17. What is the level of co-operation between the CWSA and Pronet?

Satisfactory [ ]

Unsatisfactory [ ]

18. Give reasons for your response above .....

19. What should be done to improve water and sanitation delivery in the Nadowli District?

.....

THANK YOU FOR YOUR CO-OPERATION



**APPENDIX D: QUESTIONNAIRE FOR OFFICIALS OF PRONET  
KWAME NKRUMAH UNIVERSITY OF SCIENCE AND TECHNOLOGY**

**DEPARTMENT OF GEOGRAPHY AND RURAL DEVELOPMENT**

This study is purely for academic purposes and is aimed at assessing the role of NGOs in the provision of water and sanitation in the Nadowli District. Respondents are therefore assured that information provided will be treated confidentially.

**Please tick [✓] where appropriate and use NA where question is not applicable to you.**

**SECTION A: BACKGROUND OF PRONET**

1. Job title of respondent .....
2. What is the mission of Pronet.....  
.....
3. What is the vision of Pronet.....  
.....
4. Where is the headquarters of Pronet.....
5. How many years has Pronet been operating in the District.....
6. Where does it get its funding from .....
7. Why has Pronet chosen to work in the Nadowli District? .....

**SECTION B: Water and sanitation situation in Nadowli District before Pronet's intervention**

8. What was the water and sanitation situation in the communities before your institution's intervention?

Satisfactory [ ☐ ]

Unsatisfactory [ ☐ ]

9. Give reasons for your answer above.....
10. How were the people coping with the observed water situation?
  1. Depending on water from ponds, streams, and rivers [ ☐ ]
  2. Rain harvesting [ ☐ ]
  3. Others (please specify).....
11. How were the people coping with the observed sanitation situation?
  1. Practising open defecation [ ☐ ]
  2. Dig a hole and do it [ ☐ ]

3. In a dug – out hole [ ]
4. Others (please specify).....
12. What were the health implications of the water and sanitation situation?
1. Diarrhoea [ ]
2. Skin diseases [ ]
3. Cholera [ ]
4. Guinea worm [ ]
13. Please explain your answer above.....

**SECTION C: water and sanitation situation after Pronet's intervention**

14. What is the water situation after Pronet's intervention?
- Satisfactory [ ]
- Unsatisfactory [ ]
15. Please explain your answer above .....
16. What is the sanitation situation after Pronet's intervention?
- Satisfactory [ ]
- Unsatisfactory [ ]
17. Please your answer above .....

**Please complete the table below**

**18. WATER FACILITIES PROVIDED BY PRONET FROM 2000 - 2010**

No.	NAME OF COMMUNITY	TYPE OF FACILITY (eg. Boreholes, wells etc)	NUMBER OF FACILITIES	No. OF BENEFICIARIES
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				

Please complete the table below

**19. SANITATION FACILITIES PROVIDED BY PRONET FROM 2000 -2010**

No.	NAME OF COMMUNITY	TYPE OF FACILITY (eg. KVIP, pit latrine etc)	NUMBER OF FACILITIES	No. OF BENEFICIARIES
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				

**SECTION D: Extent of collaboration between ProNet and other stakeholders in water and sanitation**

20. What kind of support does Pronet give to the communities to help in water and sanitation?

1. Financial [ ]
2. Provide facilities [ ]
3. Technical [ ]
4. Material [ ]
5. Others (specify).....

21. Has there been any collaboration between the CWSA and Pronet in providing water and sanitation facilities?

Yes [ ]

No [ ]

22. If yes, what is the form of collaboration?(tick all that apply)

1. Technical assistance [ ]
2. Financial assistance [ ]
3. Equipment [ ]
4. Materials for facilities [ ]

23. What is the level of co-operation between the CWSA and Pronet?

Satisfactory [ ]

Unsatisfactory [ ]

24. Give reasons for your answer above .....

25. In which part of the project cycle were the people involved in during the provision of the water and sanitation facilities? (tick all that apply)

1. Type of facility [ ]
2. Siting of the facility [ ]
3. Operation of facility [ ]
4. Construction of facility [ ]
5. Maintenance of facility [ ]

26. In which other way did the beneficiary communities or individuals contribute to the establishment of the water and sanitation facilities?

1. Communal labour [ ]
2. Payment of levy [ ]
3. Others (please specify).....

### **SECTION E: Challenges and prospects**

27. Are there any challenges faced by Pronet in executing their projects?

Yes [ ]

No [ ]

28. If yes, what are some of the challenges .....

29. What are you doing to overcome these challenges.....

30. What are your plans and projections for the communities or individuals as far as water and sanitation are concerned?

.....

31. What more should be done to ensure adequate water and sanitation delivery in the study area?

.....

### **SECTION F**

#### **Other water and sanitation services provided by Pronet**

32. What other services in relation to water and sanitation does Pronet provide?

1. Washing of hands before and after visiting the toilet [ ]
2. Education to keep our surroundings clean [ ]

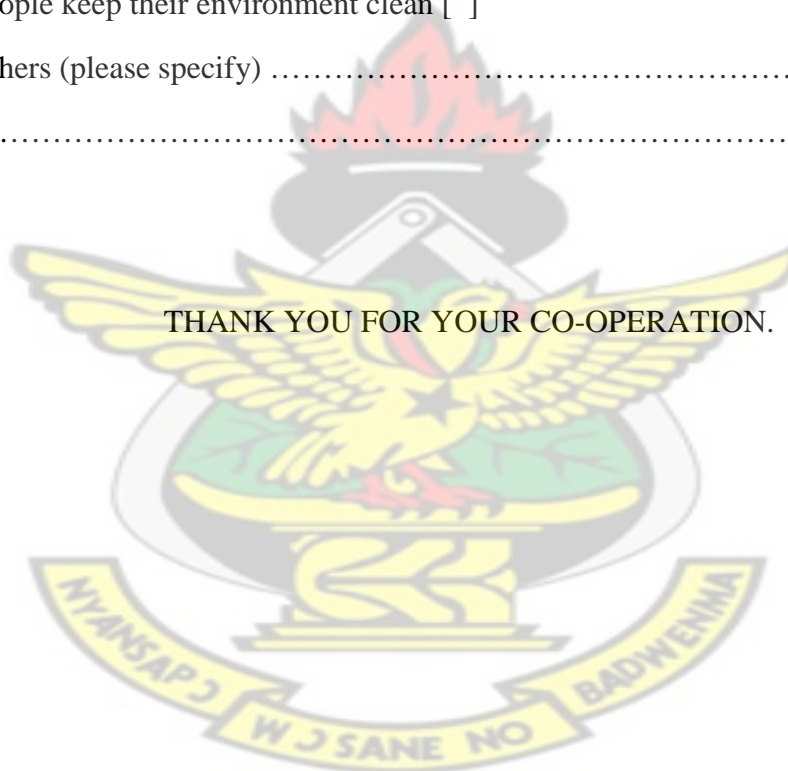
3. Provide containers for washing of hands in schools [   ]
4. Education to prevent open defecation [   ]
5. Education on burying corpse in the cemetery not in the community [   ]
6. Others (please specify) .....

33. How have these services improved water and sanitation in the study area?.....

34. How have these services improved life in general in the communities?

1. Personal hygiene has improved among the people [   ]
2. Has prevented open defecation [   ]
3. People keep their environment clean [   ]
4. Others (please specify) .....

.....



THANK YOU FOR YOUR CO-OPERATION.